



Power supplies and UPS

For superior system availability

POWER for superior system availability

Our POWER products supply your application with leading technology and high quality.

Power supplies, DC/DC converters, redundancy modules, and uninterruptible power supplies are optimally tailored in terms of their functionality and design to the requirements of various different industries.

With our QUINT, TRIO, UNO, MINI, and STEP product ranges, you are optimally equipped to handle competitors on an international scale.

Find out more with the web code

You can find web codes in this brochure: A pound sign followed by a four-digit number combination.

i Web code: #1234 (example)

This allows you to access information on our website quickly.

It couldn't be simpler:

1. Go to the Phoenix Contact website
2. Enter # and the number combination in the search field
3. Get more information and product versions

Or use the direct link:

phoenixcontact.net/webcode/#1234



SFB
TECHNOLOGY

Power supplies

SFB (Selective Fuse Breaking) technology:

- 6 times the nominal current for 15 ms
- Reliably switches off faulty current paths in the event of a short circuit
- Important system parts remain in operation without any interruption

For more information, refer to page 6 and onwards.



NFC Technology (Near Field Communication):

- Signaling thresholds and characteristic curves can be individually adjusted wirelessly via the NFC interface
- Setting parameters via mobile terminal devices or PCs

For more information, refer to page 6 and onwards.



Redundancy modules

ACM (Auto Current Balancing) technology:

- Even distribution of the load for redundant power supplies
- Low thermal load for both power supplies
- Service life of the redundant solution is doubled

For more information, refer to page 28 and onwards.



Uninterruptible power supplies

IQ technology:

- Intelligent battery management
- Optimizes and keeps you informed of the remaining runtime, state of charge, and service life of the power storage
- Optimized charging characteristic for maximum service life
- Communication with higher-level controllers

For more information, refer to page 32 and onwards.

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Power supplies – A comparison of the advantages

The product ranges differ with regard to their design, performance, and functionality.

Select the ideal solution based on your requirements:

- QUINT POWER
Maximum functionality
- TRIO POWER
Robust standard functionality
- UNO POWER
Compact basic functionality

The product range is supplemented with types tailor-made for specific applications:

- MINI POWER for measurement and control technology
- STEP POWER for installation distributors

Further information on power supplies:
Simply type the web code into the search field on our website.

 Web code: #0151



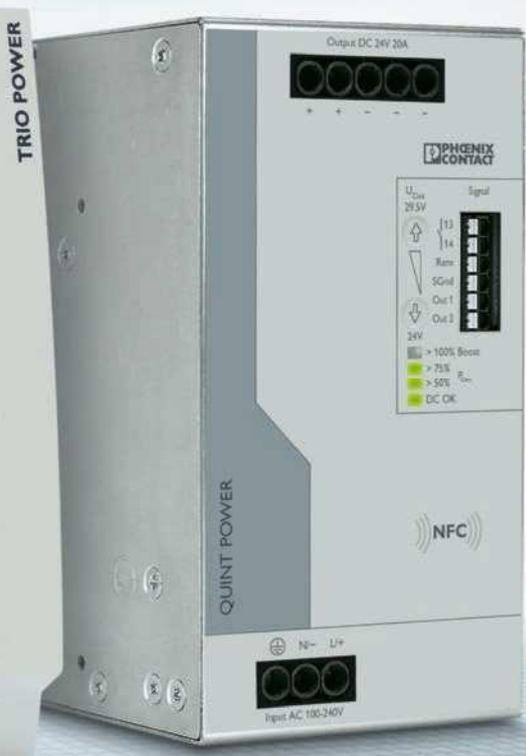
Power/current



IQ
TECHNOLOGY

SFB
TECHNOLOGY

ACB
TECHNOLOGY



1000 W
40 A

1000 W
40 A

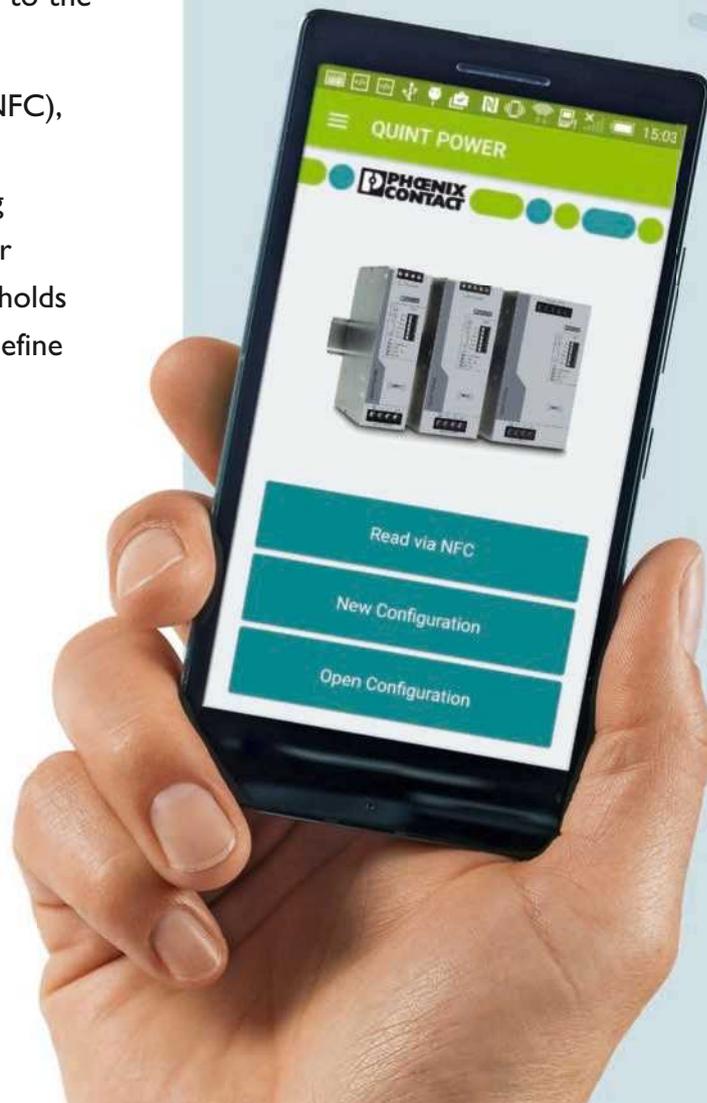
	QUINT POWER	TRIO POWER	UNO POWER	MINI POWER	STEP POWER
Worldwide use Thanks to the wide range input and international approval package	•	•	•	•	•
Maximum operating time Thanks to high MTBF > 500,000 h at +40°C	•	•	•	•	•
Can be switched in parallel For increased performance and redundancy	•	•	•	•	•
Outdoor installation permitted Thanks to wide temperature range from -25°C... +70°C	•	•	•	•	•
Active function monitoring By means of switching output for remote diagnostics	•	•		•	
Three-phase devices Error-free operation, even if one phase fails permanently	•	•			
Reliable starting of difficult loads With the dynamic boost power reserve	•	•			
NFC interface For wireless parameter settings	•				
Easy system extension With the static boost power reserve	•				
Preventive function monitoring Reports critical operating states before errors occur	•				
Magnetic tripping of circuit breakers Thanks to SFB technology	•				

QUINT POWER – Superior system availability through SFB and NFC technology

Even standard circuit breakers can be tripped reliably and quickly with SFB (Selective Fuse Breaking) technology and six times the nominal current for 15 ms. Faulty current paths are switched off selectively, the fault is located, and important system parts remain in operation.

Comprehensive diagnostics are provided through constant monitoring of the output voltage and output current. This preventive function monitoring visualizes critical operating states and indicates them to the controller before errors can occur.

With Near Field Communication (NFC), you can easily and precisely set the parameters for power supplies using a PC or mobile terminal devices. For example, you can set signaling thresholds as well as voltages and individually define characteristic curves.





SFB
TECHNOLOGY

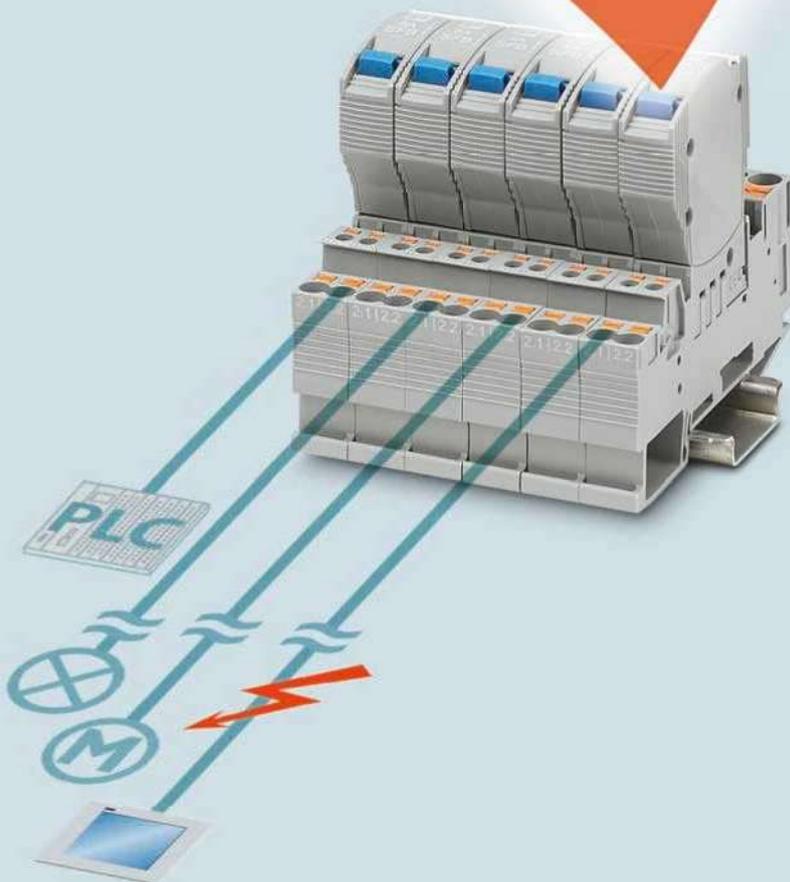
Cost-effective selective protection with SFB technology

In order to trip standard circuit breakers magnetically and therefore quickly, power supplies must be able to supply several times the nominal current for a short period.

Example: A frayed display cable can trip the fuse. The lower level display is dark. The controller, sensors, and actuators continue to operate without interruption – production continues.

The maximum cable lengths are described in the configuration matrix, which is available as a free download on the Phoenix Contact website under “Power supplies with maximum functionality”.

In addition, thermal magnetic circuit breakers which are designed specifically for SFB technology are suitable for even tripping with extremely long cables.



QUINT POWER power supplies – Maximum functionality

The fourth generation of the high-performance QUINT POWER power supplies ensures superior system availability by means of new functions. Signaling thresholds and characteristic curves can be individually adjusted via the NFC interface.

The unique SFB technology and preventive function monitoring of the QUINT POWER power supply increase the availability of your application.



Further information on
QUINT POWER power supplies:
Simply enter the web code in the
search field on our website.

 Web code: [#0640](#)

Your advantages

SFB technology

- Selectively trips standard circuit breakers; loads that are connected in parallel continue working

Preventive function monitoring

- Reports critical operating states before errors occur

NFC technology

- Adjustable signaling thresholds and characteristic curves maximize system availability

Power reserve

- Easy system extension with static boost with sustained power of up to 125 %
- Reliable starting of heavy loads with dynamic boost with up to 200 % power for 5 s

High level of immunity to interference

- Due to integrated gas-filled surge arrester
- More than 20 ms mains buffering time
- Thanks to high MTBF > 500,000 h

Robust design

- Metal housing and wide temperature range from -40°C to +70°C

Worldwide use

- Thanks to the wide range input and international approval package



QUINT POWER with NFC technology, 1~



Input: 1-phase, 85 ... 264 V AC



24 V/5 A

QUINT4-PS/1AC/24DC/5
2904600



24 V/10 A

QUINT4-PS/1AC/24DC/10
2904601



24 V/20 A

QUINT4-PS/1AC/24DC/20
2904602

QUINT POWER with NFC technology, 3~



Input: 3-phase, 3 x 320 ... 550 V AC, +/- 300 V DC



24 V/5 A

QUINT4-PS/3AC/24DC/5
2904620



24 V/10 A

QUINT4-PS/3AC/24DC/10
2904621



24 V/20 A

QUINT4-PS/3AC/24DC/20
2904622

QUINT POWER 1~



Input: 1-phase, 85 ... 264 V AC, 90 ... 350 V DC, for 24 V/40 A and 48 V/20 A: 90 ... 300 V DC



24 V/3.5 A

QUINT-PS/1AC/24DC/3.5
2866747



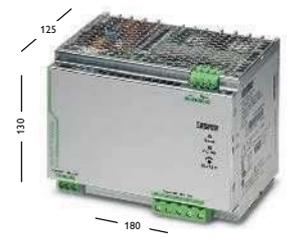
48 V/5 A

QUINT-PS/1AC/48DC/5
2866679



48 V/10 A

QUINT-PS/1AC/48DC/10
2866682



24 V/40 A

QUINT-PS/1AC/24DC/40
2866789

48 V/20 A

QUINT-PS/1AC/48DC/20
2866695

12 V/15 A

QUINT-PS/1AC/12DC/15
2866718

12 V/20 A

QUINT-PS/1AC/12DC/20
2866721

QUINT POWER 3~



Input: 3-phase, 3 x 320 ... 575 V AC, 450 ... 800 V DC



24 V/40 A

QUINT-PS/3AC/24DC/40
2866802



48 V/20 A

QUINT-PS/3AC/48DC/20
2320827

QUINT POWER for extreme ambient conditions

Coating on the PCB protects against dust, corrosive gases, and 100 % humidity as well as failure caused by corrosion-related creepage currents and electrochemical migration. The components are protected within a wide

temperature range of -40°C to $+70^{\circ}\text{C}$.

DC/DC converters with the same properties can be found on page 23.

For sensitive loads, e.g. in process technology: OVP (Over Voltage

Protection) limits surge voltages to 32 V, also useful in redundant operation with QUINT ORING (see page 31).

QUINT POWER dip-coated



Input 1-phase: 85 ... 264 V AC, 90 ... 430 V DC, 3-phase: 3 x 320 ... 575 V AC, 450 ... 800 V DC



1 AC/24 V/5 A

QUINT-PS/1AC/24DC/5/CO
2320908



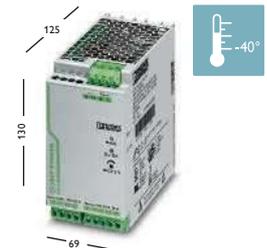
1 AC/24 V/10 A

QUINT-PS/1AC/24DC/10/CO
2320911



1 AC/24 V/20 A

QUINT-PS/1AC/24DC/20/CO
2320898



3 AC/24 V/20 A

QUINT-PS/3AC/24DC/20/CO
2320924

TRIO POWER power supplies – Robust standard functionality

The TRIO POWER power supplies are perfect for use in machine building. All functions and the space-saving design are tailored to the high requirements in this field. The power supply units, which feature an extremely robust electrical and mechanical design, ensure the reliable supply of all loads even under harsh ambient conditions.



Save time thanks to quick and easy installation with push-in connection

Your advantages for TRIO POWER with push-in connection

Very cost-effective

- Quick installation, thanks to tool-free push-in connection
- Slim design

Reliable starting of difficult loads

- Dynamic power reserve with 150 % of the nominal current for 5 s

Robust design

- Robust electrical design with high electric strength of single-phase devices up to 300 V AC, error-free function of the three-phase modules, even if one phase fails permanently
- Robust mechanical design with vibration resistance up to 4g and shock resistance up to 30g
- High MTBF > 1 million hours at +40°C
- Metal housing from 10 A and wide temperature range from -25°C to +70°C
- Device startup at -40°C (from 10 A, type-tested)



TRIO POWER push-in connection 1~

Input: 1-phase, 85 ... 264 V AC, 99 ... 275 V DC



24 V/3 A

TRIO-PS-2G/1AC/24DC/3/C2LPS
2903147



24 V/5 A

TRIO-PS-2G/1AC/24DC/5
2903148



24 V/10 A

TRIO-PS-2G/1AC/24DC/10
2903149



24 V/20 A

TRIO-PS-2G/1AC/24DC/20
2903151

Certified in accordance with UL
1310/508 Listed Class 2

TRIO POWER push-in connection 3~

Input: 3-phase, 3 x 320 ... 575 V AC, 2 x 360 ... 575 V AC



24 V/5 A

TRIO-PS-2G/3AC/24DC/5
2903153



24 V/10 A

TRIO-PS-2G/3AC/24DC/10
2903154



24 V/20 A

TRIO-PS-2G/3AC/24DC/20
2903155



4-channel

CBM E4 24DC/0,5-10A NO-R
2905743

8-channel

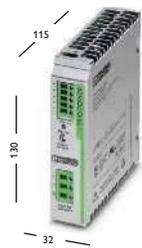
CBM E8 24DC/0,5-10A NO-R
2905744

Accessories

Electronic device circuit breakers

TRIO POWER screw connection 1~

Input: 1-phase, 85 ... 264 V AC



12 V/5 A

TRIO-PS/1AC/12DC/5
2866475



12 V/10 A

TRIO-PS/1AC/12DC/10
2866488



48 V/5 A

TRIO-PS/1AC/48DC/5
2866491



48 V/10 A

TRIO-PS/1AC/48DC/10
2866501



24 V/40 A

TRIO-PS/3AC/24DC/40
2866404

... 3~

3-phase, 3 x 320 ... 575 V AC

UNO POWER power supplies – Compact basic functionality

Thanks to their high power density, UNO POWER power supplies offer the ideal solution for loads up to 240 W, particularly in compact control boxes. The wide range of products covers all common voltage levels.



With output voltages from 5 V DC to 48 V DC, UNO POWER makes available all the typical voltage levels used in the industry

Your advantages

Maximum energy efficiency

- Save energy, thanks to high efficiency of up to 94 %
- Save energy, thanks to extremely low idling losses to below 0.3 W

Extremely compact

- Save space in the control cabinet thanks to extremely high power density
- Housing depth of just 84 mm up to 100 W, tailored to all popular 120 mm control boxes

Outdoor installation

- Wide temperature range from -25°C to +70°C



UNO POWER 1~

Input: 1-phase, 85 ... 264 V AC

				
24 V/30 W	24 V/60 W	24 V/100 W	24 V/150 W	24 V/240 W
UNO-PS/1AC/24DC/30W 2902991	UNO-PS/1AC/24DC/60W 2902992	UNO-PS/1AC/24DC/100W 2902993	UNO-PS/1AC/24DC/150W 2904376	UNO-PS/1AC/24DC/240W 2904372
		24 V/90 W *		
		UNO-PS/1AC/24DC/90W/C2LPS 2902994		
		48 V/60 W		
		UNO-PS/1AC/48DC/60W 2902995		
		48 V/100 W		
		UNO-PS/1AC/48DC/100W 2902996		
15 V/30 W	15 V/55 W	15 V/100 W		
UNO-PS/1AC/15DC/30W 2903000	UNO-PS/1AC/15DC/55W 2903001	UNO-PS/1AC/15DC/100W 2903002		
12 V/30 W	12 V/55 W	12 V/100 W		
UNO-PS/1AC/12DC/30W 2902998	UNO-PS/1AC/12DC/55W 2902999	UNO-PS/1AC/12DC/100W 2902997		
5 V/25 W	5 V/40 W			
UNO-PS/1AC/5DC/25W 2904374	UNO-PS/1AC/5DC/40W 2904375			

UNO POWER 2~

Input: 2-phase, 264 ... 575 V AC



24 V/90 W *

UNO-PS/2AC/24DC/90W/C2LPS
2904371

* Certified in accordance with UL 1310/508 Listed Class 2 LPS (Limited Power Source)

MINI POWER power supplies for measurement and control technology

Modular electronics housings are used as standard in measurement and control technology. MINI POWER is the ideal power supply for this type of application.

Your advantages

Easy-maintenance connection technology

- Coded COMBICON connectors

Flexible

- Numerous output voltages and versions available

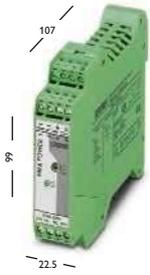
Function monitoring

- Active function monitoring via the switching output for remote monitoring of the output voltage



MINI POWER 1~

Input: 1-phase, 85 ... 264 V AC, 90 ... 350 V DC



24 V/1.3 A

MINI-PS-100-240AC/24DC/1.3
2866446



24 V/2 A

MINI-PS-100-240AC/24DC/2
2938730



± 15 V/1 A

MINI-PS-100-240AC/2x15DC/1
2938743

5 V/3 A

MINI-PS-100-240AC/5DC/3
2938714

10 ... 15 V/2 A

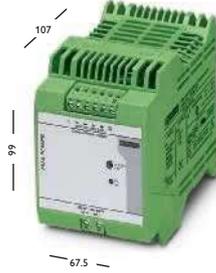
MINI-PS-100-240AC/10-15DC/2
2938756

Input: 1-phase, 85 ... 264 V AC, 90 ... 350 V DC



24 V/4 A

MINI-PS-100-240AC/24DC/4
2938837



24 V/100 W

MINI-PS-100-240AC/24DC/C2LPS
2866336

Certified in accordance with UL 1310/508 Listed Class 2



24 V/1.5 A

MINI-SYS-PS-100-240AC/24DC/1.5
2866983

10 ... 15 V/8 A

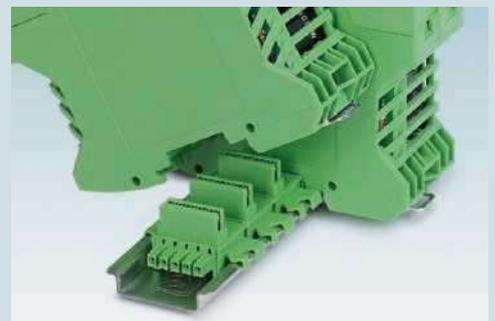
MINI-PS-100-240AC/10-15DC/8
2866297

24 V/1.5 A

MINI-PS-100-240AC/24DC/1.5/EX
2866653



Accessories for 24 V/1.5 A



DIN rail connector

ME 17,5 TBUS 1.5/5-ST-3,82 GN
2709561

Optional, 2 required per power supply (24 V/1.5 A)

STEP POWER power supplies for installation distributors

STEP POWER power supplies are ideal for installation distributors and flat control panels. The low idling losses and the high degree of efficiency ensure maximum energy efficiency in its class.



When mounting on level surfaces: Lugs integrated in the housing eliminate the need for additional mounting material

Your advantages

Flexible mounting

- Snap onto the DIN rail or screw on a level surface

Reliable supply

- High MTBF > 500,000 h at +40°C
- U/I characteristic curve for supplying capacitive loads

Outdoor installation

- Wide temperature range from -25°C to +70°C

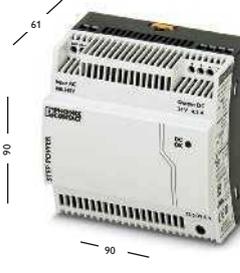
Save energy

- Maximum energy efficiency and incredibly low idling losses



STEP POWER 1~

Input: 1-phase, 85 ... 264 V AC, 95 ... 250 V DC

			
24 V/0.5 A STEP-PS/1AC/24DC/0.5 2868596	24 V/0.75 A FL STEP-PS/1AC/24DC/0.75/FL 2868622	24 V/0.75 A STEP-PS/1AC/24DC/0.75 2868635	24 V/1.75 A STEP-PS/1AC/24DC/1.75 2868648
12 V/1 A STEP-PS/1AC/12DC/1 2868538	12 V/1.5 A FL STEP-PS/1AC/12DC/1.5/FL 2868554	12 V/1.5 A STEP-PS/1AC/12DC/1.5 2868567	12 V/3 A STEP-PS/1AC/12DC/3 2868570
5 V/2 A STEP-PS/1AC/5DC/2 2320513			
			
24 V/2.5 A STEP-PS/1AC/24DC/2.5 2868651	5 V/6.5 A STEP-PS/1AC/5DC/6.5 2868541	24 V/4.2 A STEP-PS/1AC/24DC/4.2 2868664	24 V/100 W STEP-PS/1AC/24DC/3.8/C2LPS 2868677
12 V/5 A STEP-PS/1AC/12DC/5 2868583	15 V/4 A STEP-PS/1AC/15DC/4 2868619	48 V/2 A STEP-PS/1AC/48DC/2 2868680	Certified in accordance with UL 1310/508 Listed Class 2

STEP for 48 V AC*

Input: 1-phase,
43 ... 52 V AC, 60 ... 80 V DC



48 V AC/24 V DC/0.5 A
STEP-PS/48AC/24DC/0.5
2868716

STEP for 277 V AC**

Input: 1-phase,
85 ... 305 V AC, 95 ... 250 V DC



277 V AC/24 V DC/3.5 A
STEP-PS/277AC/24DC/3.5
2904945

* For special applications

** For use in the North American market

DC/DC converters adapt voltages

QUINT and MINI DC/DC converters alter the voltage level, regenerate the voltage at the end of long cables, or enable the creation of independent supply systems by means of electrical isolation.

Your advantages

Regeneration of the output voltage

- Constant voltage, even at the end of long cables
- Wide input voltage range
 - **24 V**: 18 ... 32 VDC, from 14 ... 32 VDC during operation
 - **12 V**: 9 ... 18 V DC
 - **48 V**: 30 ... 60 V DC
 - 42 ... 96 V DC and 67 ... 154 V DC wide range inputs

Fast tripping of standard circuit breakers

- Dynamic power reserve with SFB technology with up to six times the nominal current for 12 ms (for details on SFB technology, see pages 6/7)

Preventive function monitoring

- Indicates critical operating states before errors occur, thanks to permanent monitoring of the input voltage, output voltage, and output current
- Remote monitoring using active switching output and floating relay contact

Reliable starting of difficult loads and easy system extension

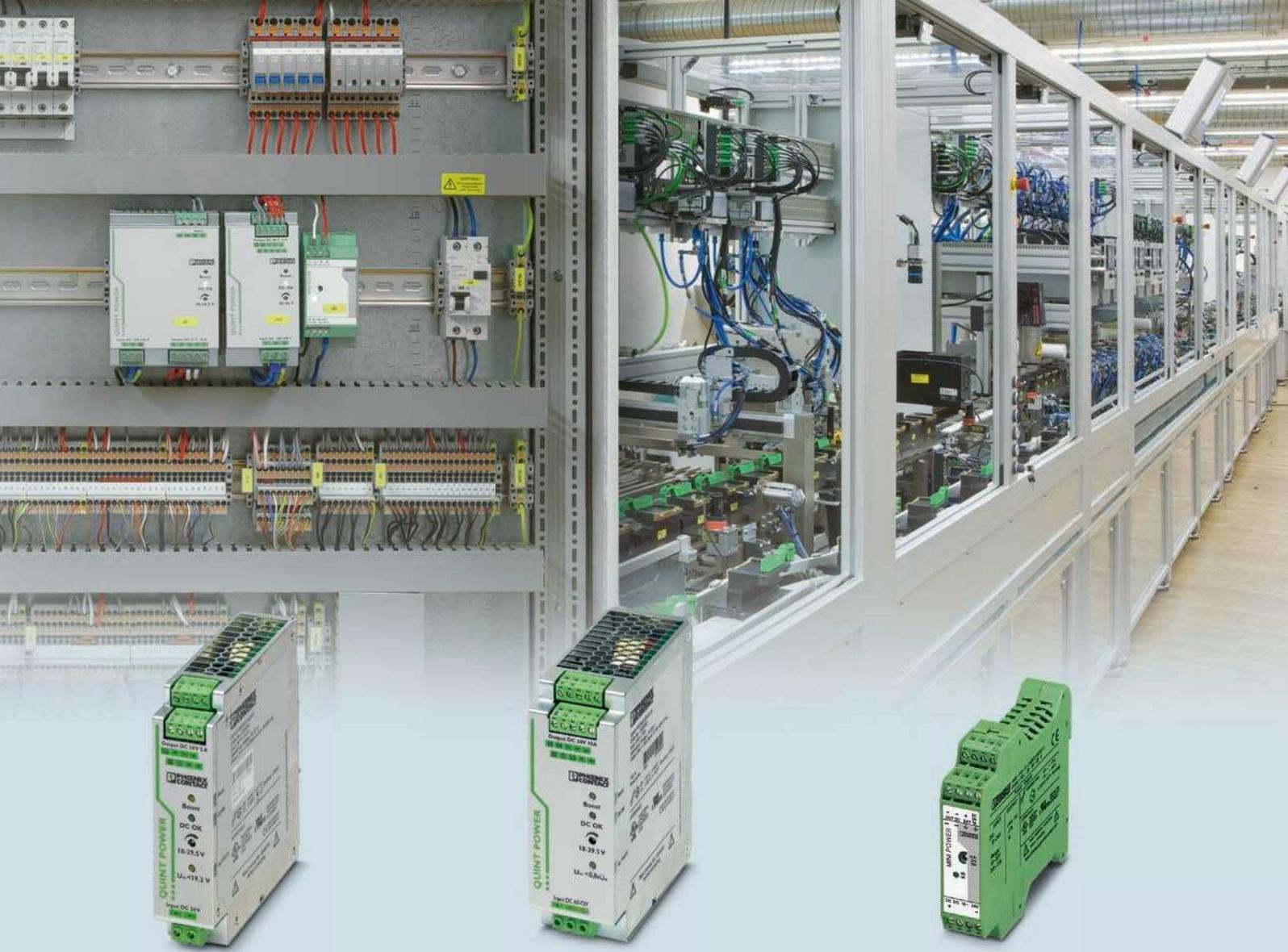
- Static boost with a sustained power reserve up to 125 % of the nominal current

Further information about DC/DC converters:
Simply type the web code into the search field on our website.

 Web code: #0152



SFB
TECHNOLOGY

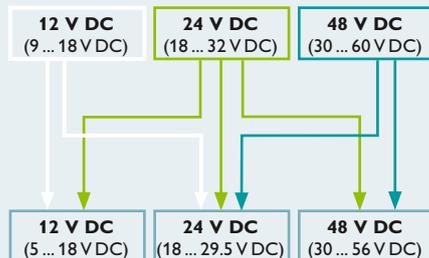


QUINT DC/DC converters

All common input and output voltages in performance classes up to 480 W for all industries as well as devices with approvals for the process industry.

Voltage levels

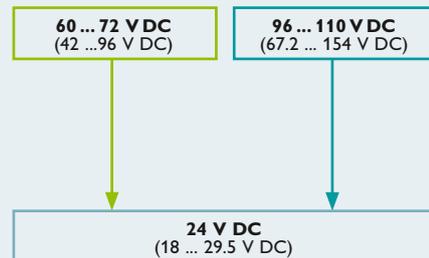
Input



Output

High degree of flexibility thanks to wide input voltage ranges, e.g. for railway applications or power generation.

Input

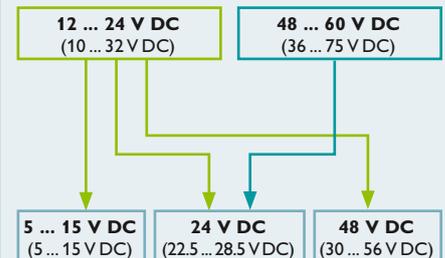


Output

MINI DC/DC converters

All common input and output voltages in performance classes up to 24 W for measurement and control technology.

Input



Output

Input: 1-phase, 18 ... 32 V DC



24 V/24 V/5 A

QUINT-PS/24DC/24DC/5
2320034

24 V/12 V/8 A

QUINT-PS/24DC/12DC/8
2320115



24 V/24 V/10 A

QUINT-PS/24DC/24DC/10
2320092

24 V/48 V/5 A

QUINT-PS/24DC/48DC/5
2320128



24 V/24 V/20 A

QUINT-PS/24DC/24DC/20
2320102

Input: 1-phase, 9 ... 18 V DC



12 V/24 V/5 A

QUINT-PS/12DC/24DC/5
2320131

12 V/12 V/8 A

QUINT-PS/12DC/12DC/8
2905007

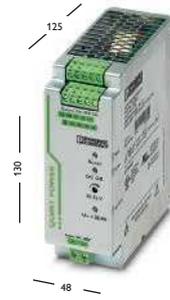
Input: 1-phase, 30 ... 60 V DC



48 V/24 V/5 A

QUINT-PS/48DC/24DC/5
2320144

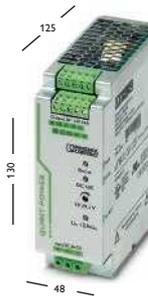
Input: 1-phase, 30 ... 60 V DC



48 V/48 V/5 A

QUINT-PS/48DC/48DC/5
2905008

Input: 1-phase, 42 ... 96 V DC



60 ... 72 V/24 V/10 A

QUINT-PS/60-72DC/24DC/10
2905009

Input: 1-phase, 67.2 ... 154 V DC



96 ... 110 V/24 V/10 A

QUINT-PS/96-110DC/24DC/10
2905010

QUINT DC/DC converters, coated



SFB
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Input: 1-phase, 18 ... 32 V DC



24 V/24 V/5 A

QUINT-PS/24DC/24DC/5/CO
2320542



24 V/24 V/10 A

QUINT-PS/24DC/24DC/10/CO
2320555



24 V/24 V/20 A

QUINT-PS/24DC/24DC/20/CO
2320568

For details on protective coating, see page 11.

Input: 1-phase, 42 ... 96 V DC



60 ... 72 V/24 V/10 A

QUINT-PS/60-72DC/24DC/10/CO
2905011

Input: 1-phase, 67.2 ... 154 V DC



96 ... 110 V/24 V/10 A

QUINT-PS/96-110DC/24DC/10/CO
2905012

MINI DC/DC converters

Input: 1-phase, 10 ... 32 V DC, 36 ... 75 V DC



12 ... 24 V/24 V/1 A

MINI-PS-12-24DC/24DC/1
2866284



48 ... 60 V/24 V/1 A

MINI-PS-48-60DC/24DC/1
2866271



12 ... 24 V/5 ... 15 V/2 A

MINI-PS-12-24DC/5-15DC/2
2320018

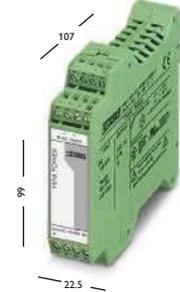


12 ... 24 V/48 V/0.7 A

MINI-PS-12-24DC/48DC/0.7
2320021

Accessories

Input: 1-phase, 10 ... 42 V AC



10 ... 42 V AC/15 ... 60 V DC/3 A

MINI-PS-10-42AC/15-60DC/3
2320199

- AC feed-in terminal for upstream MINI DC/DC converters
- AC voltage of a transformer is rectified and filtered

UNO DC/DC converters

Supply your control cabinet directly from the photovoltaic system with the new DC/DC converters from the UNO POWER range. As a result, you save on installation costs and increase system efficiency.



UNO DC/DC converters for direct supply of Combiner Box from photovoltaic panel

Your advantages

Wide input voltage range

- 300 V DC ... 1000 V DC

Direct field installation

- No need to supply an AC connection

UL 1741-certified DC/DC converters

- Simplified approval of the overall system

Minimal space requirements in control box

- Thanks to the compact design and high degree of efficiency

Simplified startup

- Thanks to LED function monitoring



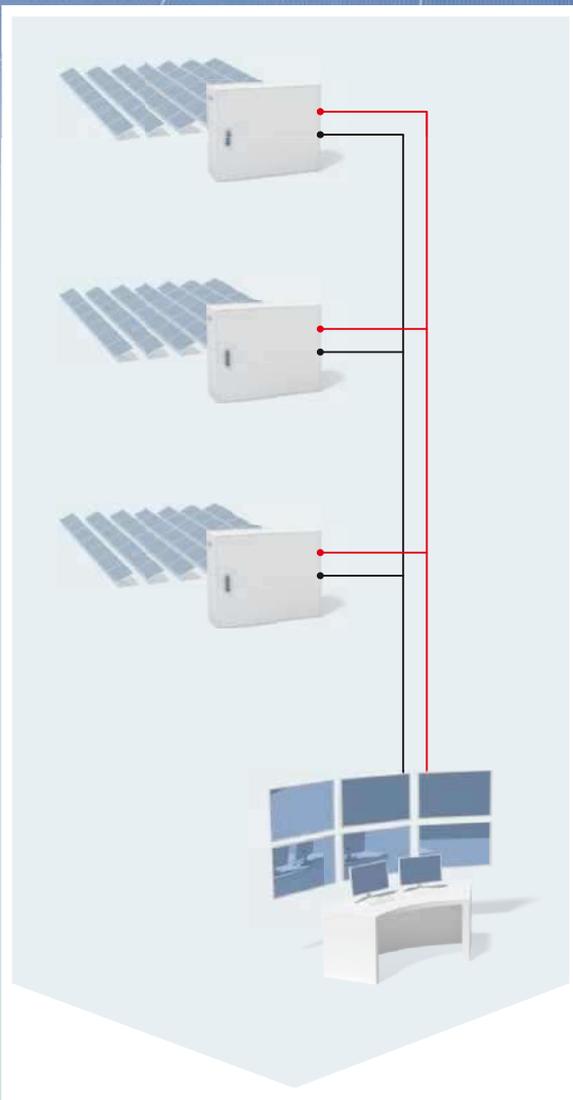
UNO DC/DC converters

Input: 1-phase, 350 ... 900 V DC

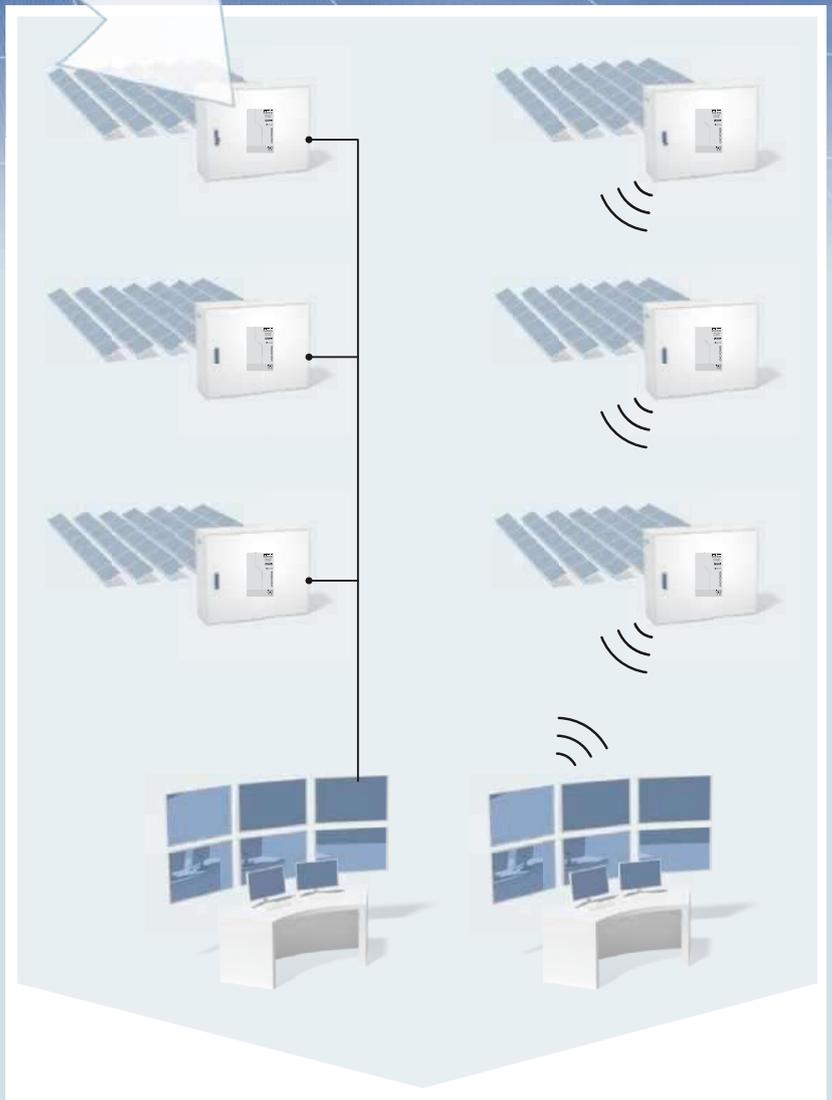


350 ... 900 DC/24 DC/60 W

UNO-PS/350-900DC/24DC/60W
2906300



In the application shown, the Combiner Box is connected to a supply line (red, e.g. 230 V AC) and a signal line (black). Laying the lines involves significant installation costs.



UNO POWER allows direct connection to string voltages of up to 1000 V DC. This means the Combiner Box is supplied directly from the photovoltaic panel and additional installation costs are not incurred. In another expansion stage, the signal line can be replaced by a wireless connection.

Power supplies for frequency inverters

These power supplies are specifically designed for connection to frequency inverters. In the event of mains failure, the DC intermediate circuit voltage of the inverter continues to supply all connected 24 V loads without interruption.

Your advantages

Compact buffer solution

- Maintenance-free buffer solution: Controlled machine stop in the event of mains failure by using the existing capacity in the frequency inverter
- Combined in one housing: Parallel operation on two-phase AC mains and a DC intermediate circuit

Fast tripping of standard circuit breakers

- Dynamic power reserve with SFB technology with up to six times the nominal current for 15 ms (for details on SFB technology, see pages 6/7)

Preventive function monitoring

- Indicates critical operating states before errors occur, thanks to permanent monitoring of the output voltage and output current
- Remote monitoring using active switching output and floating relay contact

Reliable starting of difficult loads and easy system extension

- Power Boost static power reserve sustainably supplies 26 A

SFB
TECHNOLOGY



TRIO POWER, 1 DC

Input: 450 VDC ... 840 VDC

i Web code: #0924



24 V/20 A

TRIO-PS/600DC/24DC/20
2866530

Application example: When using frequency inverters, the energy (e.g. kinetic energy in motor braking mode) from the intermediate circuit capacitors already available can be used

QUINT POWER, 2 AC/1 DC



Input: 2 x 360 ... 575 V AC, 450 ... 840 V DC

i Web code: #0923

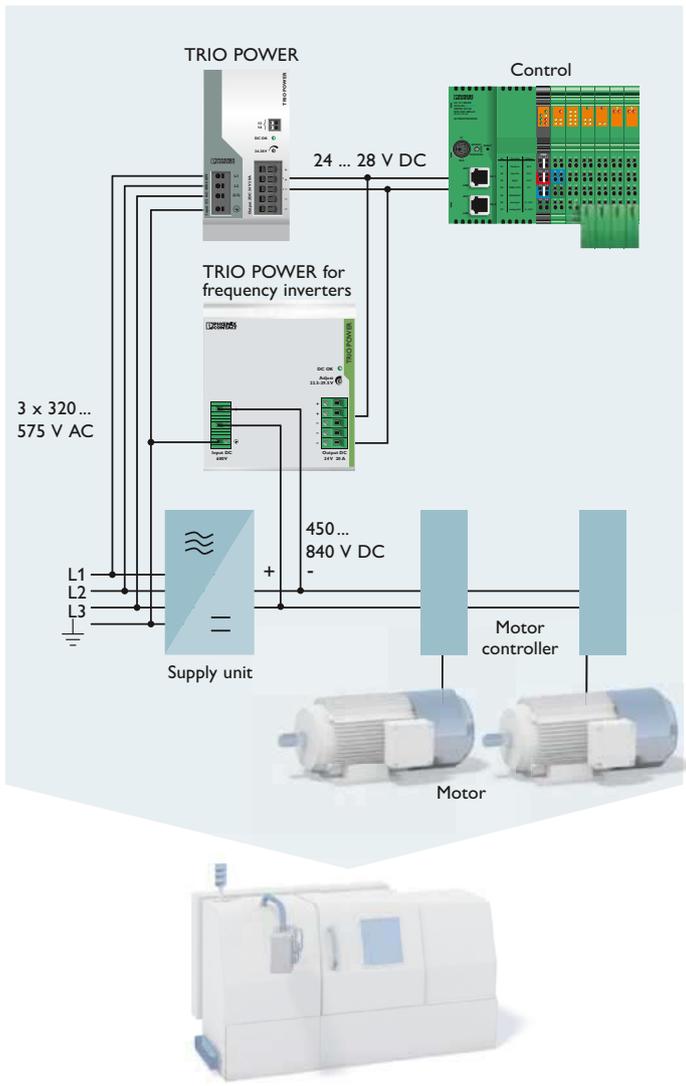


24 V/20 A

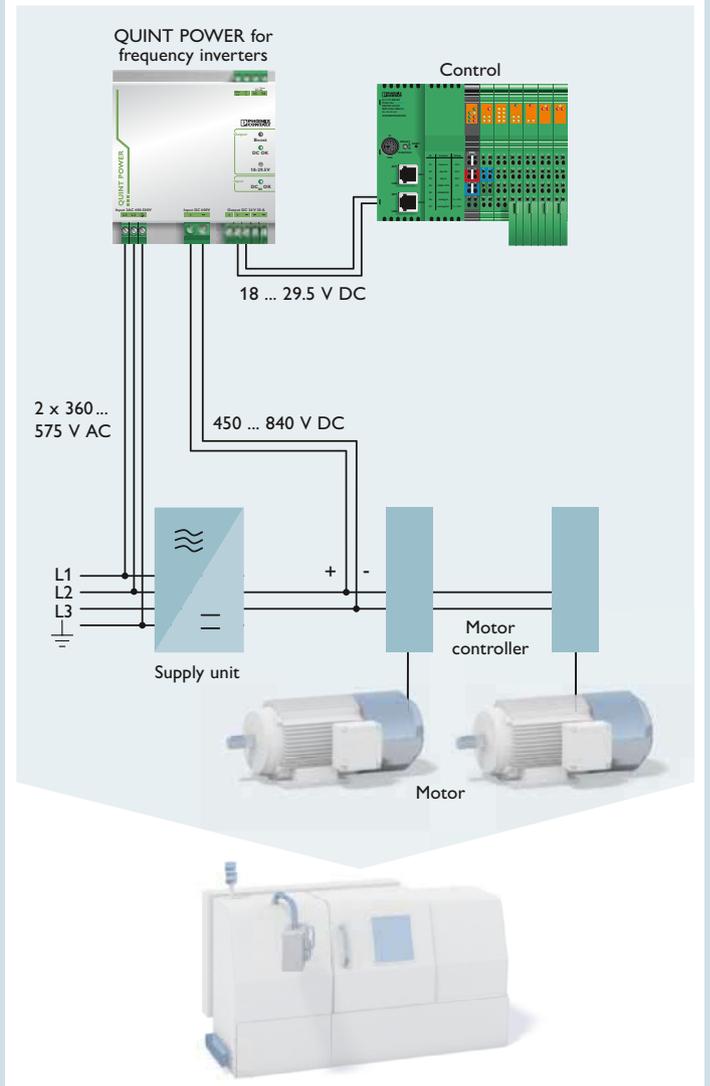
QUINT-PS/2AC/1DC/24DC/20
2320830

as a maintenance-free buffer solution. This can be used, for example, to ensure that a machine takes a safe position in the event of mains failure.

Standard solution with two TRIO POWER power supplies



Combined solution with a QUINT POWER power supply



Active redundancy module for superior system availability thanks to ACB technology

The ACB (Auto Current Balancing) technology of the QUINT ORING modules doubles the service life of redundantly operated power supplies by evenly utilizing the power supply units. The load current is automatically distributed symmetrically.

A system made up of two QUINT POWER power supplies and a QUINT ORING ensures a maximum output voltage of 32 V DC even if two faults occur. In this way, loads are reliably protected against static surge voltages.

With permanent redundancy monitoring of the input voltage, output current, and decoupling section, the loss of redundancy is reported early on.

Further information about redundancy modules:
Simply type the web code into the search field on our website.

 Web code: #0153



**50 %
power**



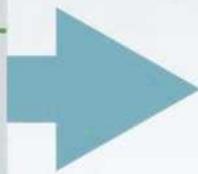
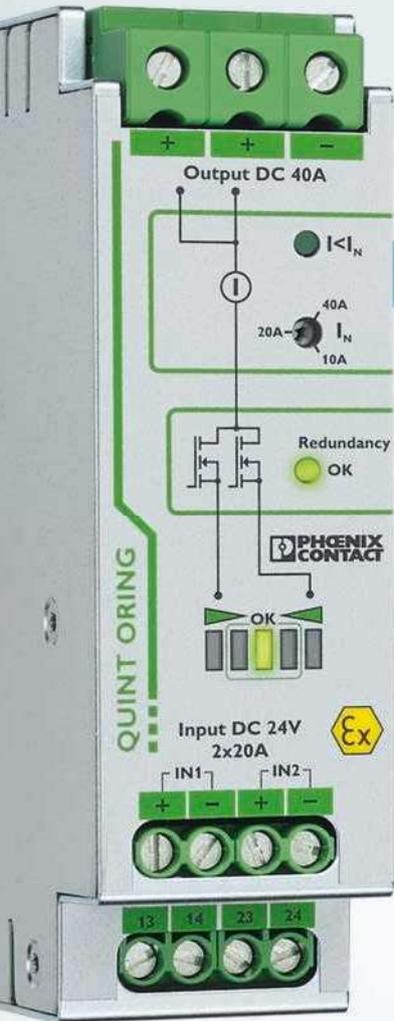
**ACB
TECHNOLOGY**

ACB technology doubles the service life

In applications with the highest demands regarding operational reliability, redundant power supply solutions are implemented to ensure that the failure of a power supply unit does not result in system downtime.

As a result of asymmetries, the load is often supplied by one power supply unit, while the other runs in no-load operation. This results in a thermal load on the working power supply unit and therefore rapid aging. If the power supply unit is operated at half the nominal current, it remains significantly cooler.

The ACB technology of the QUINT ORING modules ensures symmetrical loading of the power supplies and thereby up to double the service life of the redundant system.



50 % power



Your advantages

Preventive function monitoring

- Permanent monitoring of the input voltage, output current, and decoupling section

Consistent redundancy

- Redundant wiring up to the load with two positive output terminal blocks

Double the service life

- Thanks to even load distribution

70 % energy saving

- Decoupling is implemented with MOSFET instead of diodes

OVP (Over Voltage Protection)

- Surge voltages are limited to 32 V
- Doubly failsafe with:
2 x QUINT POWER and 1 x QUINT ORING

Robust design

- Protective coating for extreme requirements
- Approvals for use in potentially explosive areas

Decoupling, monitoring, and controlling redundancy modules

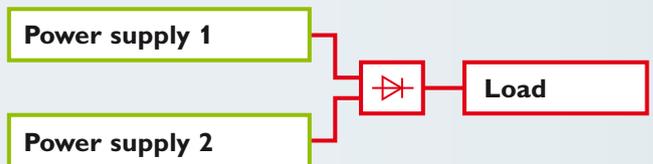
A safe redundant system is the result of the parallel connection of two power supply units which are disconnected from each other. To further increase the system availability, additional monitoring of the redundancy is recommended. The following are ideal solutions:

- Decoupling, monitoring, and control
- Decoupling



Decoupling, monitoring, and control

Decoupling with active redundancy module + monitoring of the power supply unit voltages, the wiring, decoupling, and the load current.



Decoupling

Decoupling with diode.

- Monitored
- Not monitored

QUINT ORING



Input: 18 ... 28 V DC



24 V/2 x 10 A/1 x 20 A
QUINT-ORING/24DC/2x10/1x20
 2320173



24 V/2 x 20 A/1 x 40 A
QUINT-ORING/24DC/2x20/1x40
 2320186



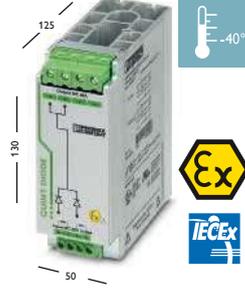
24 V/2 x 40 A/1 x 80 A
QUINT-ORING/24DC/2x40/1x80
 2902879

QUINT DIODE

Input: 10 ... 30 V DC, 30 ... 56 V DC



12 ... 24 V/2 x 20 A/1 x 40 A
QUINT4-DIODE/12-24DC/2x20/1x40
 2907719



12 ... 24 V/2 x 20 A/1 x 40 A
QUINT-DIODE/12-24DC/2x20/1x40
 2320157

48 V/2 x 20 A/1 x 40 A
QUINT4-DIODE/48DC/2x20/1x40
 2907720

48 V/2 x 20 A/1 x 40 A
QUINT-DIODE/48DC/2x20/1x40
 2320160

TRIO DIODE

Input: 10 ... 30 V DC



12 ... 24 V/2 x 10 A/1 x 20 A
TRIO2-DIODE/12-24DC/2x10/1x20
 2907380



12 ... 24 V/2 x 20 A/1 x 40 A
TRIO2-DIODE/12-24DC/2x20/1x40
 2907379

UNO DIODE

Input: 4.5 V ... 30 V DC



5 ... 24 V
UNO-DIODE/5-24DC/2x10/1x20
 2905489

STEP DIODE

Input: 4.5 ... 30 V DC



5 ... 24 V/2 x 5 A/1 x 10 A
STEP-DIODE/5-24DC/2x5/1x10
 2868606

Intelligent UPS system for superior system availability thanks to IQ technology

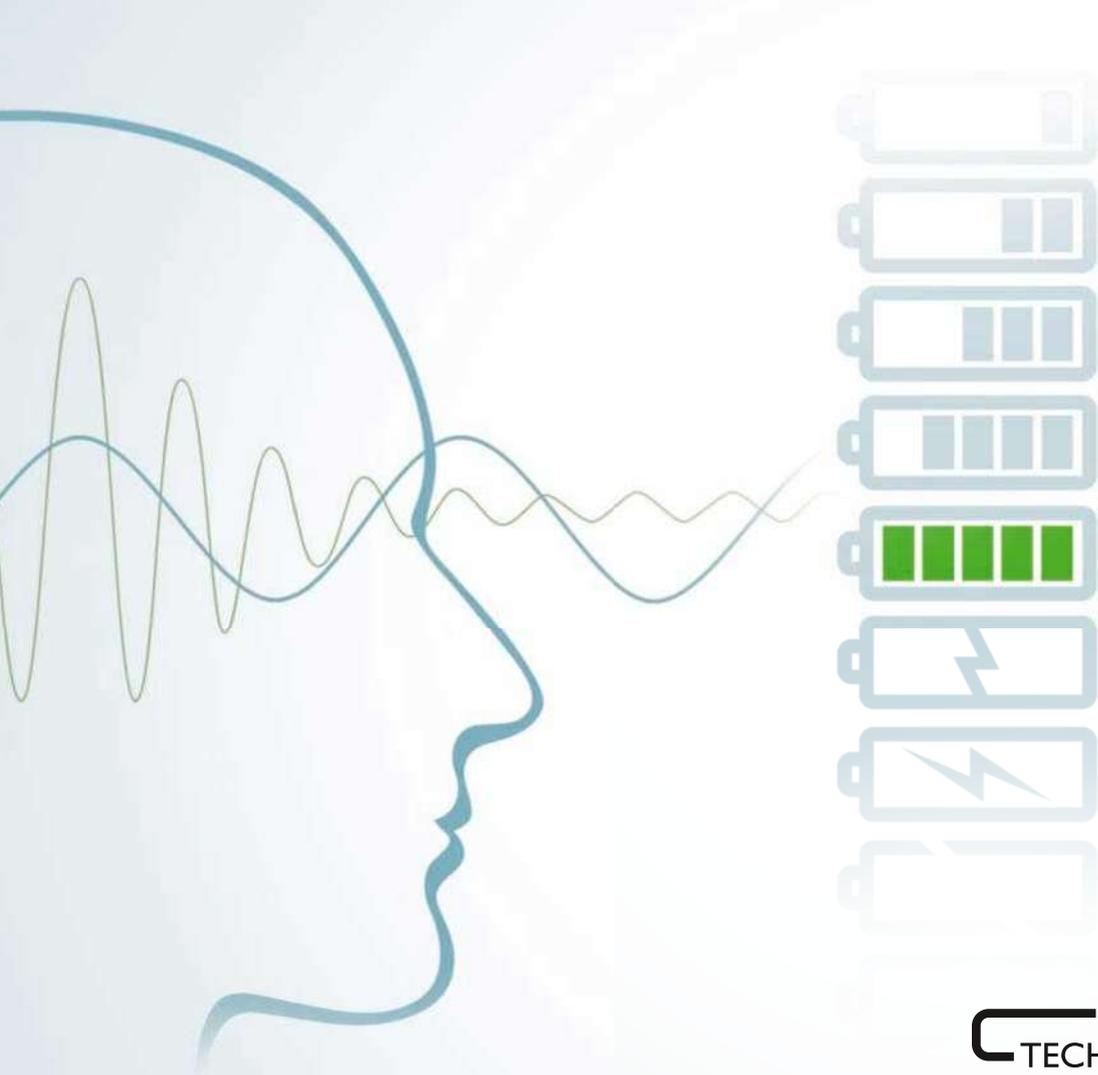
Uninterruptible power supplies (UPS) continue to deliver power even in the event of mains failure. With our IQ technology, you are one step ahead:

- You know the state of charge and remaining runtime of your energy storage
- You are warned about failures at an early stage which makes it possible to plan servicing
- You can maximize the service life of the energy storage
- You can transfer all relevant information to your computer and higher-level controllers

Further information on uninterruptible power supplies
Simply type the web code into the search field on our website.

 Web code: #0154





Intelligence for superior system availability

Task: An industrial PC must be continuously supplied with 24 V DC.

Previous solution: The UPS with 3.4 Ah buffers 24 V DC/5 A for 20 minutes under optimum conditions. Can the energy storage actually bridge this time? State of charge, performance, and remaining runtime of the energy storage are unknown.

Solution with QUINT UPS: The intelligent UPS determines all relevant energy storage states. This ensures the transparency required to guarantee the stability of the supply at all times

with optimum use of the energy storage. The intelligent battery management detects the current state of charge of the connected energy storage and uses this to calculate the remaining runtime available. The QUINT UPS also indicates whether the remaining buffer time is actually 20 minutes. As soon as an adjustable threshold value is reached, a warning message is sent via the floating relay contact, the software or directly to higher-level controllers.

Intelligence in any combination

Create your own individual solution – tailored to your application.

1. Choose your power supply
2. Choose your UPS module
3. Choose your energy storage:
 - UPS-CAP for maximum service life
 - UPS-BAT/LI-ION for long service life with long buffer times
 - UPS-BAT/VRLA and VRLA-WTR for maximum buffer times



Power supply



QUINT UPS	QUINT BUFFER	TRIO UPS	UNO UPS	MINI UPS	STEP UPS	
•						Intelligence for superior system availability with IQ technology
•						Flexible thanks to various energy storage technologies
•						Able to communicate for integration into higher-level controllers
•		•				Configuring behavior of the UPS using software
•	•	•	•		•	UPS module with integrated energy storage
		•		•		UPS module with integrated power supply



UPS module



Energy storage



The IQ technology is intuitive and provides you with information as soon as it is required.

Intelligent battery management

SOC (state of charge) – current state of charge and remaining runtime of the energy storage.

SOH (state of health) – remaining life expectancy of the energy storage, warns of failure at an early stage.

Intelligent battery control

Detects the connected battery type automatically and maximizes the remaining service life of the energy storage by means of an optimally adapted charging characteristic.

Intelligent charging

Adapts the charging current, thereby ensuring the fastest possible recharging and availability.

Data port

Used for communication between the UPS module and PC or higher-level controller.

UPS modules for DC applications

The UPS module for 24 V DC with output currents ranging from 5 to 40 A allows you to create a custom solution combining a power supply, UPS module, and energy storage.

Your advantages

Optimum use of the buffer time and preventive monitoring of the energy storage

- Detects the current state of charge of the energy storage and calculates the remaining runtime
- Calculates the current life expectancy of the energy storage

Rapid battery charging

- Adaptive current management charges the energy storage device twice as fast as before, while simultaneously providing sufficient energy for the loads

Comprehensive signaling and parameterization

- Floating relay contacts
- Data Port
- Parameterization with memory module

Substantial power reserve

- For mains and battery operation
- Power Boost static power reserve
- SFB technology (Selective Fuse Breaking)
(for details on SFB Technology, refer to pages 6/7)

SFB
TECHNOLOGY

IQ
TECHNOLOGY



Power supply

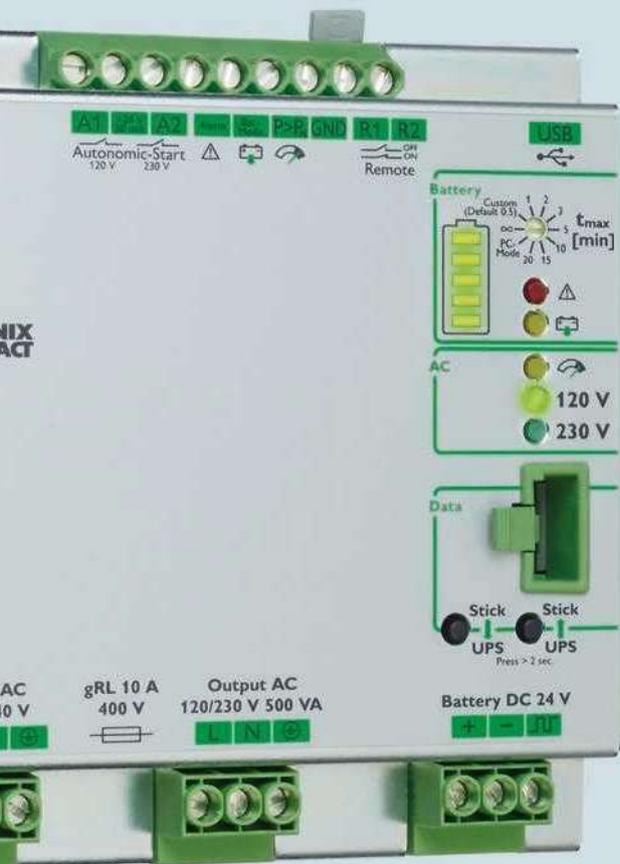


UPS module



Energy storage

UPS module for AC applications



The UPS module for 120 V AC/230 V AC delivers a pure sine curve at the output. For 400 W/500 VA of power, only one energy storage is required, the power supply is already integrated.

Your advantages

Optimum use of the buffer time and preventive monitoring of the energy storage

- Detects the current state of charge of the energy storage and calculates the remaining runtime
- Calculates the current life expectancy of the energy storage

Worldwide use

- Input voltages from 102 V AC ... 264 V AC
- Pure sine curve: The sine generated in battery operation is synchronous with the mains previously used for supply
- In the event of mains failure, the output is automatically supplied with 120 V AC/60 Hz or 230 V AC/50 Hz
- Manual voltage pre-selection possible

Maximum efficiency

- Offline operation: 98 % efficiency with charged energy storage

Comprehensive signaling and parameterization

- Switching outputs
- USB interface
- Data port
- Parameterization with memory module

Simplified startup

- The UPS can be switched on without a power supply network (autonomous start)

QUINT UPS with energy storage

You can always find the ideal solution for superior system availability with the modular system for uninterruptible power supplies.

The different storage media are characterized by different properties:

- Long service life
- Extremely long buffer times
- Maintenance-free
- Can be used at extreme ambient temperatures

Type	Typical buffer time	Temperature
UPS-CAP...	< 5 min.	-40 to +60°C
UPS-BAT/LI-ION...	> 40 min.	-20 to +58°C
UPS-BAT/VRLA-WTR...	> 5 h	-25 to +60°C
UPS-BAT/VRLA...	> 8 h	0 to +40°C



Further information on the UPS configurator:
Simply type the web code into the search field on our website.

i Web code: #1076

UPS-BAT/VRLA... (Valve Regulated Lead Acid)

- Maximum buffer times
- Lead AGM (Absorbent Glass Mat) technology



Power supply



UPS module



Energy storage

Service life at +20°C	Service life at +50°C	Charging cycles at +20°C	Weight (standardized)
> 20 years	8 years	> 500,000	0.4 kg
15 years	2 years	7,000	0.45 kg
12 years	1.5 years	300	1.3 kg
6 ... 9 years	1 year	250	1 kg



UPS-BAT/VRLA-WTR... (Valve Regulated Lead Acid/ Wide Temperature Range)

- Maximum buffer times at extreme temperatures
- Pure lead AGM technology (Absorbent Glass Mat)



UPS-BAT/LI-ION...

- Long service life with long buffer times
- Lithium iron phosphate technology



UPS-CAP (Capacitor)

- Maximum service life
- Maintenance-free double layer condensators

Your advantages

Fast installation

- Automatic detection of the energy storage by QUINT UPS
- Tool-free replacement during operation

Maximum availability

- Constant communication with QUINT UPS for continuous monitoring and intelligent management

Extremely long service life

- Optimum charging characteristic in accordance with the technology and ambient conditions

Immediate availability

- All energy storage devices leave our warehouse fully charged

Selection guide for QUINT UPS and CAP, LI-ION, VRLA-WTR



Buffer times for DC UPS modules

Select your **UPS-BAT** and **UPS-CAP** for 24 V DC applications here.

Example: 20 A needs to be buffered for 6 minutes:

→

→ QUINT-DC-UPS/24DC/20A and UPS-BAT/LI-ION/24DC/120WH

↓

Load current	Buffer time																													
	Seconds						Minutes					Hours																		
	0.2	0.4	1	2	8	16	30	1	2	3	5	6	7	8	9	10	20	30	40	45	50	1	2	3	5	8	10	15	20	40
1 A	Orange						Green					Purple					Pink													
2 A	Orange						Green					Purple					Pink													
3 A	Orange						Green					Purple					Pink													
5 A	Orange						Green					Purple					Pink													
7 A	Orange						Green					Purple					Pink													
10 A	Orange						Green					Purple					Pink													
15 A	Orange						Green					Purple					Pink													
20 A	Orange						Green					Purple					Pink													
25 A	Orange						Green					Purple					Pink													
30 A	Orange						Green					Purple					Pink													
35 A	Orange						Green					Purple					Pink													
40 A	Orange						Green					Purple					Pink													

→

Buffer times for AC UPS module



Select your **UPS-BAT** and **UPS-CAP** for 120 V AC/230 V AC applications here.

Example: 125 W needs to be buffered for one hour

→

→ QUINT-UPS/1AC/1AC/500VA and UPS-BAT/VRLA-WTR/24DC/13AH

↓

Power	Buffer time																												
	Seconds						Minutes					Hours																	
	0.2	0.4	2	8	15	20	40	1	2	3	5	6	7	8	9	10	20	30	40	45	50	1	2	3	5	8	10	15	20
15 W	Orange						Green					Purple					Pink												
35 W	Orange						Green					Purple					Pink												
55 W	Orange						Green					Purple					Pink												
90 W	Orange						Green					Purple					Pink												
125 W	Orange						Green					Purple					Pink												
180 W	Orange						Green					Purple					Pink												
275 W	Orange						Green					Purple					Pink												
400 W	Orange						Green					Purple					Pink												

→

1+1 ... Two energy storage devices of the same capacity are required in this case.
The data is based on an ambient temperature of +20°C.

DC UPS modules

Dual output



24 V/5 A

**QUINT-UPS/
24DC/24DC/5**
2320212

Recommended:
UPS-CAP
UPS-BAT/VRLA-WTR
UPS-BAT/LI-ION



24 V/10 A

**QUINT-UPS/
24DC/24DC/10**
2320225

Recommended:
UPS-CAP
UPS-BAT/VRLA-WTR
UPS-BAT/LI-ION



24 V/20 A

**QUINT-UPS/
24DC/24DC/20**
2320238

Recommended:
UPS-CAP 20 A
UPS-BAT/VRLA-WTR
UPS-BAT/LI-ION



24 V/40 A

**QUINT-UPS/
24DC/24DC/40**
2320241

Recommended:
UPS-BAT/VRLA-WTR



12 V/5 A, 24 V/10 A

**QUINT-UPS/
24DC/12DC/5/24DC/10**
2320461

Recommended:
UPS-CAP
UPS-BAT/VRLA-WTR
UPS-BAT/LI-ION

AC UPS module



400 W/500 VA

QUINT-UPS/1AC/1AC/500VA
2320270

Recommended:
UPS-CAP 20 A
UPS-BAT/VRLA-WTR
UPS-BAT/LI-ION

UPS-CAP

UPS-BAT/LI-ION

UPS-BAT/VRLA-WTR



10 A/10 kJ

**UPS-CAP/
24DC/10A/10KJ**
2320377



20 A/20 kJ

**UPS-CAP/
24DC/20A/20KJ**
2320380



120 WH

**UPS-BAT/LI-ION/
24DC/120WH**
2320351



13 Ah

**UPS-BAT/VRLA-WTR/
24DC/13AH**
2320416



26 Ah

**UPS-BAT/VRLA-WTR/
24DC/26AH**
2320429

Selection guide for QUINT UPS and VRLA



Buffer times for DC UPS modules

Select your **UPS-BAT** for 24 V DC applications here.

Example: 20 A needs to be buffered for 10 minutes:

- ■
- QUINT-DC-UPS/24DC/20A and UPS-BAT/VRLA/24DC/12AH

↓

Load current	Buffer time															Hours							
	Seconds				Minutes											1	2	3	5	8			
	0.2	0.4	2	8	2	3	5	6	7	8	9	10	20	30	40	45	50	1	2	3	5	8	
1 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red
2 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red
3 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red
5 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red
7 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red
10 A	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Yellow	Yellow	Yellow	Yellow	Yellow	Red
15 A	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
20 A	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
25 A	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
30 A	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
35 A	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
40 A	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red

→

Buffer times for AC UPS module



Select your **UPS-BAT** for 120 V AC/230 V AC applications here.

Example: 125 W needs to be buffered for one hour

- ■
- QUINT-UPS/1AC/1AC/500VA and UPS-BAT/VRLA/24DC/12AH

↓

Power	Buffer time															Hours							
	Seconds				Minutes											1	2	3	5	8			
	0.2	0.4	2	8	2	3	5	6	7	8	9	10	20	30	40	45	50	1	2	3	5	8	
15 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
35 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
55 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
90 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
125 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
180 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
275 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red
400 W	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Red

→

1+1 ... Two energy storage devices of the same capacity are required in this case.
The data is based on an ambient temperature of +20°C.

DC UPS modules

Dual output



24 V/5 A

**QUINT-UPS/
24DC/24DC/5**
2320212

Recommended:
1.3 ... 12 Ah
(max. 2 x 12 Ah)



24 V/10 A

**QUINT-UPS/
24DC/24DC/10**
2320225

Recommended:
1.3 ... 38 Ah
(max. 1 x 38 Ah)



24 V/20 A

**QUINT-UPS/
24DC/24DC/20**
2320238

Recommended:
3.4 ... 38 Ah
(max. 2 x 38 Ah)



24 V/40 A

**QUINT-UPS/
24DC/24DC/40**
2320241

Recommended:
7.2 ... 38 Ah
(max. 2 x 38 Ah)



12 V/5 A, 24 V/10 A

**QUINT-UPS/
24DC/12DC/5/24DC/10**
2320461

Recommended:
1.3 ... 38 Ah
(max. 1 x 38 Ah)

AC UPS module



400 W/500 VA

QUINT-UPS/1AC/1AC/500VA
2320270

Recommended:
3.4 ... 38 Ah (1x)

UPS-BAT/VRLA energy storage devices



1.3 Ah

**UPS-BAT/
VRLA/24DC/1.3AH**
2320296



3.4 Ah

**UPS-BAT/
VRLA/24DC/3.4AH**
2320306



7.2 Ah

**UPS-BAT/
VRLA/24DC/7.2AH**
2320319



12 Ah

**UPS-BAT/
VRLA/24DC/12AH**
2320322



38 Ah

**UPS-BAT/
VRLA/24DC/38AH**
2320335

QUINT UPS

Signaling and configuration

Monitor and configure your UPS system using the UPS-CONF configuration and management software.

For quick startup, important information is provided in the poster-sized brief instructions. Pictures and screenshots aid hardware and software installation and help explain the method of operation of UPS-CONF.

The quick start guide is available free of charge on the Phoenix Contact website under “Downloads” for the QUINT UPS products.



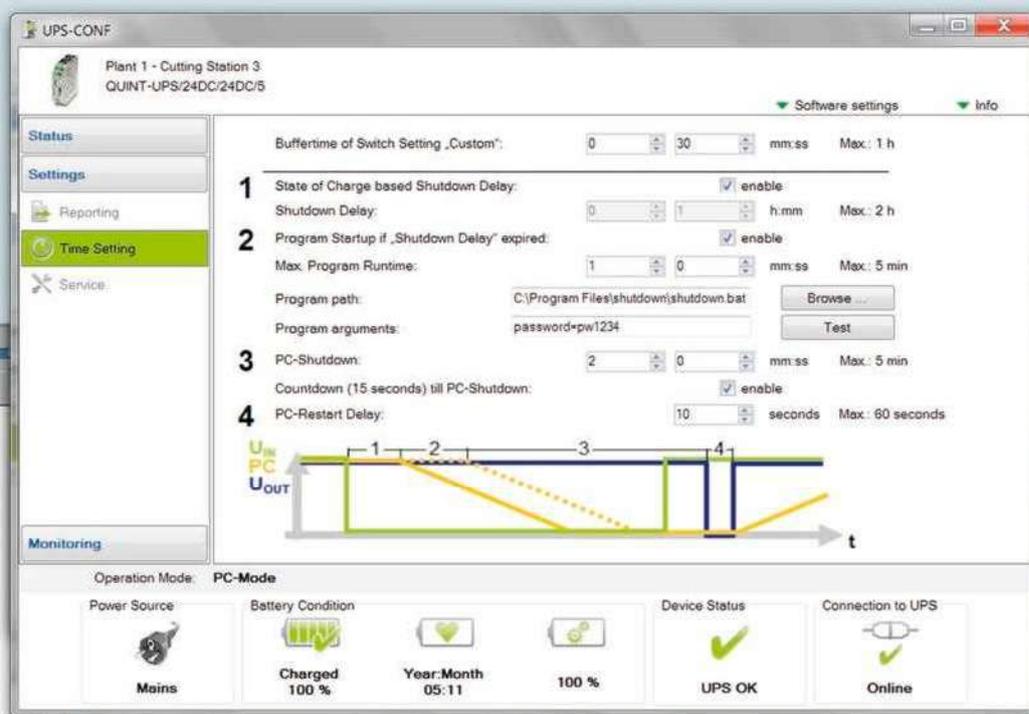
Signaling

LEDs and floating relay contacts provide function monitoring. QUINT UPS-IQ supplies the following information via the wired contacts:

- The load is being supplied by the energy storage
- The energy storage is being charged
- An alarm is present

USB interface is ideal for

- Monitoring and configuration with UPS-CONF
- Safe shutdown of industrial PCs with optimum utilization of the energy storage
- Automatic boot mode when mains returns



Configuration

- Flexible adaptation of QUINT UPS behavior to individual requirements

Preventative function monitoring

- All relevant operating parameters are displayed graphically
- Important messages appear in the foreground

Integrated data recorder

- Log file archives events, e.g. when and for how long QUINT UPS has bridged mains failures

Accessories

Software	USB data cable	Programming adapter	Memory module	Memory module
UPS-CONF 2320403	IFS-USB-DATACABLE 2320500	IFS-BT-PROG-ADAPTER 2905872	IFS-CONFSTICK 2986122	IFS-CONFSTICK-L 2901103
<ul style="list-style-type: none"> • Available free of charge on the Phoenix Contact website under "Downloads" for the QUINT-UPS/... products 	<ul style="list-style-type: none"> • For communication between UPS module and UPS-CONF • Length: 3 m 	<ul style="list-style-type: none"> • Bluetooth programming adapter for wireless communication between UPS module and UPS-CONF 	<ul style="list-style-type: none"> • For saving and transferring configured values to other QUINT UPS • Remains in device • With lock 	<ul style="list-style-type: none"> • For saving and transferring configured values to other QUINT UPS • Suitable for configuration • Without lock

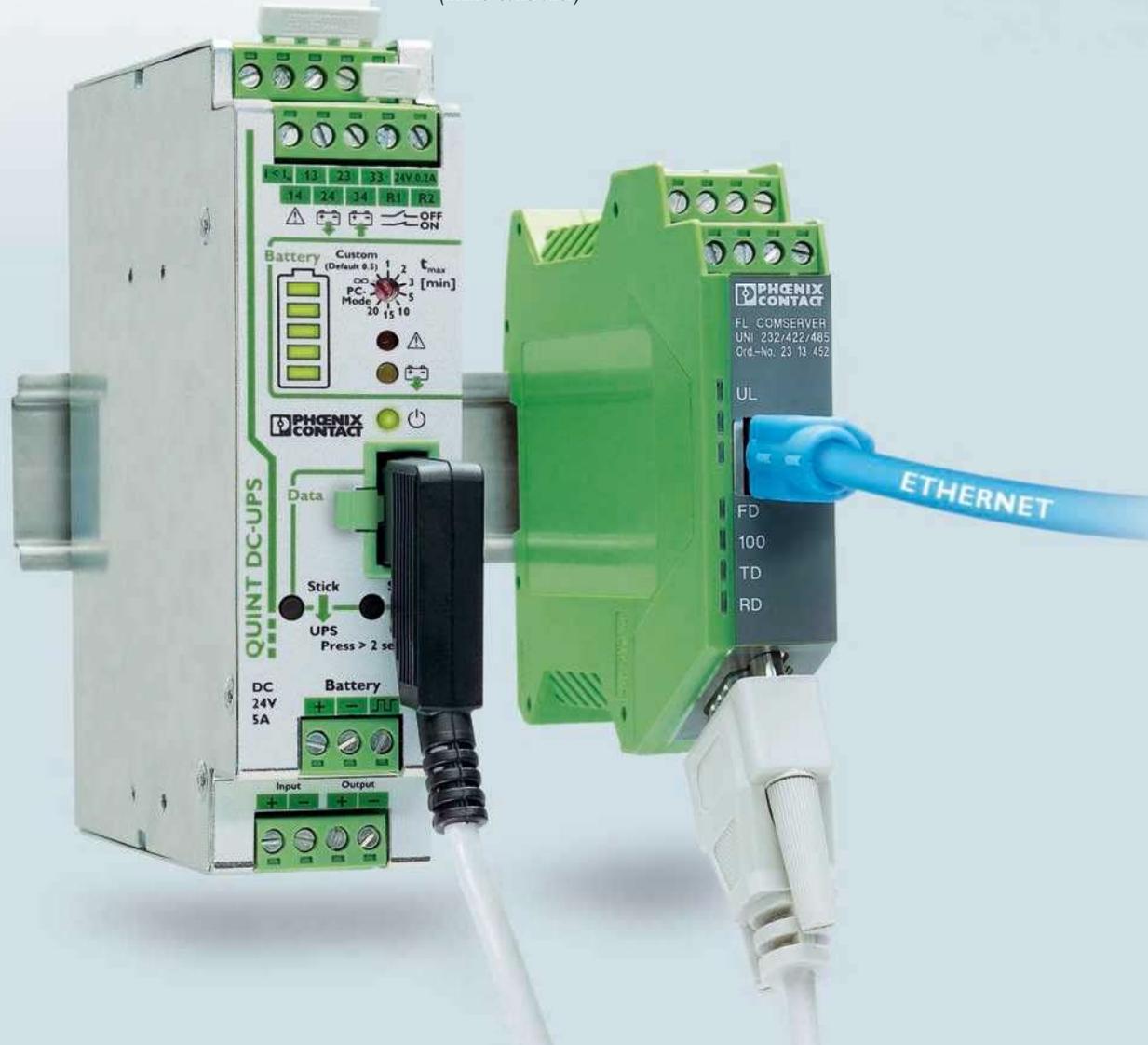
QUINT UPS Communication

Use the available data cables to integrate the UPS module into your application. You can therefore benefit from all the advantages of IQ technology and be kept informed of the state of your UPS solution.

The information provided by QUINT UPS can, for example, be forwarded to higher-level controllers via Ethernet or be implemented directly in control solutions from Phoenix Contact.



The IFS-MINI-DIN DATA CABLE is suitable for direct communication with the 100 series higher-level ILC (Inline controller)





Accessories

		
<p style="text-align: center;">RS-232 data cable</p>	<p style="text-align: center;">Open End data cable</p>	<p style="text-align: center;">MINI DIN data cable</p>
<p style="text-align: center;">IFS-RS232-DATACABLE 2320490</p>	<p style="text-align: center;">IFS-OPEN-END-DATACABLE 2320450</p>	<p style="text-align: center;">IFS-MINI-DIN-DATACABLE 2320487</p>
<ul style="list-style-type: none"> • Modbus communication with RS-232 interface • COM server from Phoenix Contact for Ethernet communication • Address higher-level controllers such as inline controllers (ILCs) or Remote Field Controllers (RFCs) directly • Use the Phoenix Contact Inline controller as a gateway and access other communication protocols • Length: 2 m 	<ul style="list-style-type: none"> • Open cable for flexible communication • Length: 2 m 	<ul style="list-style-type: none"> • Direct communication with the Inline controller (ILC) from the Phoenix Contact Inline system (100 series) • Length: 2 m

Do you use PC Worx software?

We offer you our library with the corresponding function blocks for this. The library is available free of charge on the Phoenix Contact website under “Downloads” for the QUINT-UPS/... products

UPS modules with integrated energy storage

Particularly space-saving: UPS module and energy storage combined in one housing. It's just a case of connecting a power supply upstream.

The TRIO AC-UPS ensures seamless transition to battery operation thanks to the pure sine curve. Connected industrial PCs can be shut down safely via the integrated USB interface.

Buffer times for TRIO AC-UPS

Power	Buffer time												Hours	
	Minutes												1	1.5
	1	1.5	2	4	6	8	10	15	20	30	40	50	1	1.5
50 W													1+1	1+1
100 W													1+1	1+1
150 W										1+1	1+1	1+1		
200 W									1+1	1+1	1+1			
250 W							1+1	1+1	1+1					
300 W						1+1	1+1	1+1						
400 W				1+1	1+1	1+1								
500 W			1+1	1+1	1+1									
600 W		1+1	1+1	1+1										

1+1 ... Two energy storage devices of the same capacity are required in this case. The data is based on an ambient temperature of +20°C.

Buffer times for UNO UPS and STEP UPS

Select your UPS solution here.

Example: 2.5 A needs to be buffered for 10 minutes:

→  → STEP-UPS/24DC/24DC

Load current	Buffer time												Hours													
	Seconds						Minutes						1	2	3											
	0.2	0.4	1	2	8	16	30	1	2	3	5	6	7	8	9	10	15	20	25	30	40	45	50	1	2	3
0.5 A																										
1 A																										
1.5 A																										
2 A																										
2.5 A																										
3 A																										
4 A																										

Buffer times for QUINT UPS and QUINT BUFFER

Select your UPS solution here.

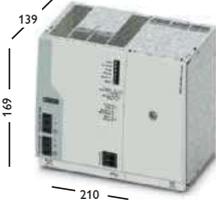
Example: 5 A needs to be buffered for 20 minutes:

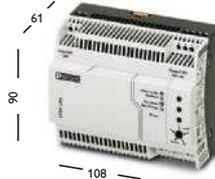
→  → QUINT-UPS/24DC/24DC/10A/3.4AH

Load current	Buffer time												Hours													
	Seconds						Minutes						1	2	3											
	0.2	0.4	1	2	8	16	30	1	2	3	5	6	7	8	9	10	15	20	25	30	40	45	50	1	2	3
0.5 A																										
1 A																										
2 A																										
3 A																										
5 A																										
7 A																										
10 A																										
15 A																										
20 A																										
25 A																										
30 A																										
35 A																										
40 A																										



Power supply **UPS module** Energy storage

TRIO AC-UPS		Accessories
Input: 1-phase, 184 ... 264 V AC 	Input: 1-phase, 96 ... 138 V AC 	
230 V/750 VA TRIO-UPS-2G/1AC/1AC/230V/750VA 2905909	120 V/750 VA TRIO-UPS-2G/1AC/1AC/120V/750VA 2905908	USB data cable MINI-SCREW-USB-DATACABLE 2908217
<ul style="list-style-type: none"> • Energy storage with lead AGM technology 	<ul style="list-style-type: none"> • Energy storage with lead AGM technology 	<ul style="list-style-type: none"> • For communication between UPS module and UPS-CONF, length 3 m

UNO UPS	STEP UPS	
Input: 1-phase, 23 ... 30 V DC 	Input: 1-phase, 24 V: 22.5 ... 29.5 V DC, 12 V: 10 ... 16.5 V DC 	
24 V/60 W UNO-UPS/24DC/24DC/60W 2905907	24 DC/24 DC/3 A STEP-UPS/24DC/24DC/3 2868703	12 DC/12 DC/4 A STEP-UPS/12DC/12DC/4 2868693
<ul style="list-style-type: none"> • Energy storage with lead AGM technology 	<ul style="list-style-type: none"> • Energy storage with lithium iron phosphate technology 	

QUINT UPS		IQ TECHNOLOGY SFB TECHNOLOGY		QUINT BUFFER
Input: 1-phase, 18 ... 30 V DC 				Input: 1-phase, 18 ... 30 V DC 
24 DC/5 A/1.3 Ah QUINT-UPS/24DC/24DC/5/1.3AH 2320254	24 DC/10 A/3.4 Ah QUINT-UPS/24DC/24DC/10/3.4AH 2320267			24 V/40 A QUINT-BUFFER/24DC/24DC/40 2320393
<ul style="list-style-type: none"> • Energy storage with lead AGM technology • Integrated temperature sensor optimizes load currents, thereby increasing the service life 				<ul style="list-style-type: none"> • Capacitor-based energy storage • Maintenance-free

UPS modules with integrated power supply

Particularly space-saving: UPS module and power supply in the same housing. Only one energy storage is required to complete the UPS system.

MINI UPS

Energy storage with lead AGM technology enables buffer times of up to two hours under nominal load for output voltages of 24 V DC or 12 V DC.

TRIO UPS

Energy storage devices with lead AGM technology buffer failures lasting up to two hours with 5 A load current.



Power supply



UPS module



Energy storage

MINI UPS + ...

Input: 1-phase,
85 ... 264 V AC, 100 ... 350 V DC

MINI-DC-UPS/24DC/2
2866640

Output: 24 V DC/2 A

MINI-DC-UPS/12DC/4
2866598

Output: 12 V DC/4 A



TRIO UPS + ...

Input: 1-phase,
85 ... 264 V AC, 100 ... 350 V DC

TRIO-UPS/1AC/24DC/5
2866611

Accessories

UPS-CONF
2320403

Configuration software is available free of charge on the Phoenix Contact website under "Downloads" for the TRIO UPS product

IFS-USB-DATACABLE
2320500

Data cable for communication between UPS-CONF and TRIO UPS

Memory modules
2986122/2901103

Memory module for saving and transferring configured values to other TRIO UPS



Buffer times for MINI UPS and TRIO UPS

Select your **MINI-BAT** for MINI UPS and **QUINT-BAT** for TRIO UPS here.

Example: 2 A needs to be buffered for 20 minutes:

- ■
- MINI-DC-UPS/24DC/2 and MINI-BAT/24DC/1.3AH



Laststrom	Minutes														Hours		
	2	3	5	6	7	8	9	10	20	30	40	45	50	1	2	3	
0.5 A																	
1 A																	
1.5 A																	
2 A																	
3 A																	
4 A																	
5 A																	

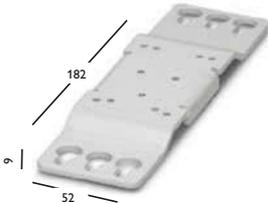
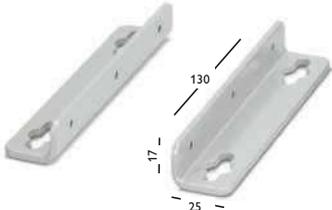
... MINI-BAT for MINI UPS

24 V DC/0.8 Ah	24 V DC/1.3 Ah	12 V DC/1.6 Ah	12 V DC/2.6 Ah
MINI-BAT/24DC/0.8AH 2866666	MINI-BAT/24DC/1.3AH 2866417	MINI-BAT/12DC/1.6AH 2866572	MINI-BAT/12DC/2.6AH 2866569

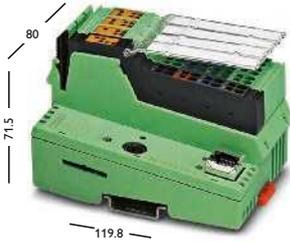
... QUINT-BAT for TRIO UPS

24 V/1.3 Ah	24 V/3.4 Ah	24 V/7.2 Ah	12 Ah
MINI-BAT/24DC/1.3AH 2866417	QUINT-BAT/24DC/3.4AH 2866349	QUINT-BAT/24DC/7.2AH 2866352	QUINT-BAT/24DC/12AH 2866365

Accessories for power supplies

Mounting on S7-300 rail		Mounting on level surfaces	
			
QUINT-PS adapter S7/1	QUINT-PS adapter S7/2	Adapter UWA 182/52	Adapter UWA 130
2938196	2938206	2938235	2901664
For: QUINT-PS/1AC/24DC/3.5 QUINT-PS/1AC/24DC/5 QUINT-PS/3AC/24DC/5	For: QUINT-PS/1AC/24DC/10 QUINT-PS/3AC/24DC/10 QUINT-PS/3AC/24DC/20	For: TRIO-PS from 10 A QUINT-PS QUINT-DC-UPS QUINT-BUFFER	For: QUINT-PS/1AC/24DC/40 QUINT-UPS/1AC/1AC/500VA QUINT4-PS

Cooling fan	Circuit breaker
	
Fan for QUINT, QUINT-PS/FAN/4	Thermal magnetic circuit breakers for QUINT
2320076	
<ul style="list-style-type: none"> • With the standard power supply mounting position, the temperature range increases by 10 K (max. ambient temperature of +70°C) • When the mounting position is rotated, position-dependent derating no longer applies • Tool-free mounting 	<ul style="list-style-type: none"> • Device circuit breakers with the SFB tripping characteristic provide maximum overcurrent protection – even in large systems with long cable paths • You will find additional information on our comprehensive range of products in the product area on the Phoenix Contact website in the Protective Devices category

Ethernet communication	
	
FL COMSERVER UNI 232/422/485	ILC 131 ETH
2313452	2700973
<ul style="list-style-type: none"> • Integration of serial RS-232, RS-422, and RS-485 interfaces • For machine and system access via Ethernet network 	<ul style="list-style-type: none"> • Modular small-scale controller with Ethernet interface for coupling to other controllers or systems

Accessories for uninterruptible power supplies

Energy storage mounting		Fuses for AC-UPS	
			
BATTERY MOUNTING KIT	BATTERY MOUNTING CASE	FUSE 40A/32V ATOF	FUSE 10A/400V GRL
2320788	2320458	2908357	2908358
For: UPS-BAT/VRLA/24DC/38AH UPS-BAT/VRLA-WTR/24DC/13AH UPS-BAT/VRLA-WTR/24DC/26AH	For: UPS-BAT/VRLA/24DC/38AH UPS-BAT/VRLA-WTR/24DC/13AH UPS-BAT/VRLA-WTR/24DC/26AH	For: TRIO-UPS-2G/1AC/1AC/230V/750VA TRIO-UPS-2G/1AC/1AC/1200V/750VA	For: TRIO-UPS-2G/1AC/1AC/230V/750VA TRIO-UPS-2G/1AC/1AC/1200V/750VA QUINT-UPS/1AC/1AC/500VA

Fuses for energy storage UPS-BAT

		
FUSE 15A/32V FK1	FUSE 25A/32V ATOF	FUSE 30A/32V ATOF
2908360	2908366	2908365
For: UPS-BAT/VRLADC/1.3AH	For: UPS-BAT/VRLADC/3.4AH UPS-BAT/VRLADC/7.2AH UPS-BAT/VRLADC/12AH UPS-BAT/VRLADC/38AH	For: UPS-BAT/LI-ION/24DC/120WH

Fuses for energy storage MINI-BAT

			
FUSE 5A/32V FK1	FUSE 15A/32V FKS	FUSE 10A/32V FK1	FUSE 25A/32V FKS
2908367	2908361	2908364	2908363
For: MINI-BAT/24DC/0.8AH	For: MINI-BAT/24DC/1.3AH	For: MINI-BAT/24DC/1.6AH	For: MINI-BAT/24DC/2.6AH

Order number	CE	UL				CSA	Ship				EX		SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601, 2 x MOOP	Railway standard EN 50155, 50121-4	EAC	Startup at -40°C	Installation height
		UL Listed UL 508	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	GL - Germanischer Lloyd	ABS - American Bureau of Shipping	BV - Bureau Veritas	LR - Lloyd's Register							
UNO POWER power supplies																			
UNO-PS/1AC/24DC/30W	2902991	•	•	•	•	•									•		•		a
UNO-PS/1AC/24DC/60W	2902992	•	•	•	•	•									•		•	•	d
UNO-PS/1AC/24DC/90W/C2LPS	2902994	•	•	•	•	•									•		•		a
UNO-PS/1AC/24DC/100W	2902993	•	•	•	•	•									•		•		a
UNO-PS/1AC/24DC/150W	2904376	•	•	•	•	•									•		•		c
UNO-PS/1AC/24DC/240W	2904372	•	•	•	•	•									•		•		a
UNO-PS/1AC/5DC/25W	2904374	•	•	•	•	•									•		•		b
UNO-PS/1AC/5DC/40W	2904375	•	•	•	•	•									•		•		a
UNO-PS/1AC/12DC/30W	2902998	•	•	•	•	•									•		•		a
UNO-PS/1AC/12DC/55W	2902999	•	•	•	•	•									•		•		d
UNO-PS/1AC/12DC/100W	2902997	•	•	•	•	•									•		•		c
UNO-PS/1AC/15DC/30W	2903000	•	•	•	•	•									•		•		a
UNO-PS/1AC/15DC/55W	2903001	•	•	•	•	•									•		•		d
UNO-PS/1AC/15DC/100W	2903002	•	•	•	•	•									•		•		d
UNO-PS/1AC/48DC/60W	2902995	•	•	•	•	•									•		•		d
UNO-PS/1AC/48DC/100W	2902996	•	•	•	•	•									•		•		c
UNO-PS/2AC/24DC/90W/C2LPS	2904371	•	•	•	•	•									•		•		b
MINI POWER power supplies																			
MINI-PS-100-240AC/24DC/1.3	2866446	•	•	•	•	•											•		d
MINI-SYS-PS-100-240AC/24DC/1.5	2866983	•	•	•	•	•											•		a
MINI-SYS-PS-100-240AC/24DC/1.5/EX	2866653	•	•	•	•	•							•				•		a
MINI-PS-100-240AC/24DC/2	2938730	•	•	•	•	•											•		b
MINI-PS-100-240AC/24DC/C2LPS	2866336	•	•	•	•	•											•		a
MINI-PS-100-240AC/24DC/4	2938837	•	•	•	•	•											•		a
MINI-PS-100-240AC/5DC/3	2938714	•	•	•	•	•											•		b
MINI-PS-100-240AC/10-15DC/2	2938756	•	•	•	•	•											•		d
MINI-PS-100-240AC/10-15DC/8	2866297	•	•	•	•	•											•		a
MINI-PS-100-240AC/2x15DC/1	2938743	•	•	•	•	•											•		b

- a) Max. 3000 m
- b) Max. 4000 m
- c) Max. 5000 m
- d) Max. 6000 m
- e) Max. 2000 m

All products receive further approvals on a continual basis.
For up-to-date information, please refer to the Phoenix Contact website under "Downloads" for the relevant products.

	Order number	UL					CSA		Ship					EX												
		CE	UL Listed UL 508	UL/C-UL Listed UL 508	UL/C-UL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	GL - Germanischer Lloyd	ABS - American Bureau of Shipping	BV - Bureau Veritas	LR - Lloyd's Register	NK - Nippon Kaiji Kyokai	DNV - Det Norske Veritas	RINA	ATEX	IEC Ex	DeviceNet™	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601, 2 x MOOP	Railway standard EN 50155, 50121-4	EAC	Startup at -40°C	Installation height
STEP POWER power supplies																										
STEP-PS/48AC/24DC/0.5	2868716	•	•	•	•	•														•			•	•	b	
STEP-PS/1AC/24DC/0.5	2868596	•	•	•	•	•														•			•	•	b	
STEP-PS/1AC/24DC/0.75FL	2868622	•	•	•	•	•			•	•			•							•	•		•	•	c	
STEP-PS/1AC/24DC/0.75	2868635	•	•	•	•	•			•	•	•	•	•		•					•	•		•	•	c	
STEP-PS/1AC/24DC/1.75	2868648	•	•	•	•	•			•	•		•								•			•	•	c	
STEP-PS/1AC/24DC/2.5	2868651	•	•	•	•	•			•	•	•	•	•		•					•			•	•	a	
STEP-PS/1AC/24DC/3.8/C2LPS	2868677	•	•	•	•	•			•								•			•			•	•	d	
STEP-PS/1AC/24DC/4.2	2868664	•	•	•	•	•			•	•		•								•			•	•	d	
STEP-PS/277AC/24DC/3.5	2904945	•	•	•		•																	•		a	
STEP-PS/1AC/5DC/2	2320513	•	•	•		•														•			•		b	
STEP-PS/1AC/5DC/6.5	2868541	•	•	•	•				•	•		•								•			•	•	d	
STEP-PS/1AC/15DC/4	2868619	•	•	•	•				•	•		•								•			•	•	c	
STEP-PS/1AC/48DC/2	2868680	•	•	•	•				•	•		•								•			•	•	d	
STEP-PS/1AC/12DC/1	2868538	•	•	•	•	•														•			•	•	b	
STEP-PS/1AC/12DC/1.5FL	2868554	•	•	•	•	•			•	•		•								•	•		•	•	c	
STEP-PS/1AC/12DC/1.5	2868567	•	•	•	•	•			•	•		•								•	•		•	•	c	
STEP-PS/1AC/12DC/3	2868570	•	•	•	•	•			•	•		•								•			•	•	c	
STEP-PS/1AC/12DC/5	2868583	•	•	•	•				•	•		•								•			•	•	d	

Order number	CE	UL				CSA	Ship						EX		DeviceNet™	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601	Railway standard EN 50155	EAC	EN 50155	EN 50121	Startup at -40°C	Installation height	
		UL Listed UL 508	UL/CUL Listed UL 508	UL/CUL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	GL - Germanischer Lloyd	ABS - American Bureau of Shipping	BV - Bureau Veritas	LR - Lloyd's Register	NK - Nippon Kaiji Kyokai	DNV - Det Norske Veritas											RINA
DC/DC converters																									
QUINT-PS/24DC/24DC/5	2320034	•	•	•	•			•	•	•	•	•	•	•			•				•	•	•	•	d
QUINT-PS/24DC/24DC/10	2320092	•	•	•	•			•	•	•	•	•	•	•			•				•	•	•	•	d
QUINT-PS/24DC/24DC/20	2320102	•	•	•	•			•	•	•	•	•	•	•			•				•	•	•	•	d
QUINT-PS/24DC/12DC/8	2320115	•	•	•	•			•	•	•	•	•	•	•			•				•	•	•	•	d
QUINT-PS/24DC/48DC/5	2320128	•	•	•	•			•	•	•	•	•	•	•			•				•	•	•	•	d
QUINT-PS/12DC/24DC/5	2320131	•	•	•	•			•	•	•	•	•	•	•			•				•	•	•	•	d
QUINT-PS/12DC/12DC/8	2905007	•	•	•	•												•				•	•	•	•	d
QUINT-PS/48DC/24DC/5	2320144	•	•	•	•			•	•	•	•	•	•	•			•				•	•	•	•	d
QUINT-PS/48DC/48DC/5	2905008	•	•	•	•												•				•	•	•	•	d
QUINT-PS/60-72DC/24DC/10	2905009	•	•	•	•												•				•	•	•	•	d
QUINT-PS/96-110DC/24DC/10	2905010	•	•	•	•												•				•	•	•	•	d
QUINT-PS/24DC/24DC/5/CO	2320542	•	•	•	•			•	•	•	•	•	•	•	•	•	•				•	•	•	•	d
QUINT-PS/24DC/24DC/10/CO	2320555	•	•	•	•			•	•	•	•	•	•	•	•	•	•				•	•	•	•	d
QUINT-PS/24DC/24DC/20/CO	2320568	•	•	•	•			•	•	•	•	•	•	•	•	•	•				•	•	•	•	d
QUINT-PS/60-72DC/24DC/10/CO	2905011	•	•	•	•												•					*	•	•	d
QUINT-PS/96-110DC/24DC/10/CO	2905012	•	•	•	•												•					*	•	•	d
UNO-PS/350-900DC/24DC/60W	2906300	•																							
MINI-PS-12-24DC/24DC/1	2866284	•	•	•	•			•													•		•		d
MINI-PS-12-24DC/5-15DC/2	2320018	•	•	•	•			•													•		•		d
MINI-PS-12-24DC/48DC/0.7	2320021	•	•	•	•			•													•		•		d
MINI-PS-48-60DC/24DC/1	2866271	•	•	•	•																•		•		d
MINI-PS/10-42AC/15-60DC/3	2320199	•	•	•													•				•				

* Approval in preparation

Order number	CE	UL				CSA	Ship						EX		DeviceNet™	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601	Railway standard EN 50155	EAC	EN 50155	EN 50121	Startup at -40°C	Installation height	
		UL Listed UL 508	UL/CUL Listed UL 508	UL/CUL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	GL - Germanischer Lloyd	ABS - American Bureau of Shipping	BV - Bureau Veritas	LR - Lloyd's Register	NK - Nippon Kaiji Kyokai	DNV - Det Norske Veritas											RINA
Power supplies for frequency inverters																									
QUINT-PS/2AC/1DC/24DC/20	2320830	•	•	•																					
TRIO-PS/600DC/24DC/20	2866530	•	•	•																	•				

Order number	CE	UL				CSA	Ship										EX		DeviceNet™	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601	Type tested	EAC	Startup at -40°C
		UL Listed UL 508	UL/CUL Listed UL 508	UL/CUL Recognized UL 60950	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	GL - Germanischer Lloyd	ABS - American Bureau of Shipping	BV - Bureau Veritas	LR - Lloyd's Register	NK - Nippon Kaiji Kyokai	DNV - Det Norske Veritas	RINA	ATEX	IEC Ex								
Redundancy modules																									
QUINT-ORING/24DC/2x10/1x20	2320173	•	•	•	•				•	•	•	•	•	•	•	•	•						•	•	
QUINT-ORING/24DC/2x20/1x40	2320186	•	•	•	•				•	•	•	•	•	•	•	•	•						•	•	
QUINT-ORING/24DC/2x40/1x80	2902879	•	•	•	•				•	•	•	•	•	•	•	•	•						•	•	
QUINT4-DIODE/24DC/2x20A	2907719	•	•	•	•																		•	•	
QUINT4-DIODE/48DC/2x20A	2907720	•	•	•	•																		•	•	
QUINT-DIODE/24DC/2x20A	2320157	•	•	•	•				•	•	•	•	•	•	•	•	•						•	•	
QUINT-DIODE/48DC/2x20A	2320160	•	•	•	•												•	•					•	•	
TRIO-DIODE/12-24DC/2x10/1x20	2866514	•	•	•					•	•	•	•	•	•	•	•							•	•	
TRIO-DIODE/48DC/2x10/1x20	2866527	•	•	•																			•	•	
STEP-DIODE/5-24DC/2x5/1x10	2868606	•	•	•																			•	•	
UNO-DIODE/5-24DC/2x10/1x20	2905489	•	•	•																			•	•	

Order number	UL				CSA	Ship				EX													
	CE	UL Listed UL 508	UL/CUL Listed UL 508	UL/CUL Recognized UL 60950	UL 1778	UL Listed ANSI/ISA-12.12.01 Class I, Division 2, Groups A, B, C, D	UL 1310 NEC Class 2	CSA 22.2 No 107.1-01	CSA 22.2 No 60950-1-07	DNV GL Group	ABS - American Bureau of Shipping	BV - Bureau Veritas	LR - Lloyd's Register	NK - Nippon Kaiji Kyokai	RINA	ATEX	DeviceNet™	SEMI F47-0706 Compliance Certificate PQ Star	CB Scheme	Medical standard IEC 60601	EAC	Startup at -40°C	Installation height
Uninterruptible power supplies																							
QUINT-UPS/24DC/24DC/5	2320212	•	•	•	•					•	•										•		d
QUINT-UPS/24DC/24DC/10	2320225	•	•	•	•					•	•										•		d
QUINT-UPS/24DC/24DC/20	2320238	•	•	•	•					•	•										•		d
QUINT-UPS/24DC/24DC/40	2320241	•	•	•	•					•	•										•		d
QUINT-UPS/24DC/12DC/5/24DC/10	2320461	•	•	•																			e
QUINT-UPS/24DC/24DC/5/1.3AH	2320254	•	•	•	•																•		d
QUINT-UPS/24DC/24DC/10/3.4AH	2320267	•	•	•	•																•		d
QUINT-UPS/1AC/1AC/500VA	2320270	•			•	•															•		e
QUINT-BUFFER/24DC/40	2320393	•	•	•	•	•				•	•										•		e
UPS-BAT/VRLA/24DC/1.3AH	2320296	•	•	•	•	•															•		d
UPS-BAT/VRLA/24DC/3.4AH	2320306	•	•	•	•	•				•	•										•		d
UPS-BAT/VRLA/24DC/7.2AH	2320319	•	•	•	•	•				•	•										•		d
UPS-BAT/VRLA/24DC/12AH	2320322	•	•	•	•	•				•	•										•		d
UPS-BAT/VRLA/24DC/38AH	2320335	•	•	•	•	•				•	•								•	•	•		d
UPS-BAT/VRLA-WTR/24DC/13AH	2320416	•	•	•	•	•													•	•	•	•	d
UPS-BAT/VRLA-WTR/24DC/26AH	2320429	•	•	•	•	•													•	•	•	•	d
UPS-BAT/LI-ION/24DC/120WH	2320351	•	•	•	•	•															•		d
UPS-CAP/24DC/10A/10KJ	2320377	•	•	•	•	•				•	•										•	•	d
UPS-CAP/24DC/20A/20KJ	2320380	•	•	•	•	•				•	•										•	•	d
TRIO-UPS-2G/1AC/230V/750VA	2905909	•			•	•															•		e
TRIO-UPS-2G/1AC/120V/750VA	2905908	•			•	•															•		e
STEP-UPS/24DC/24DC/3	2868703	•	•	•															•	•			e
STEP-UPS/12DC/12DC/4	2868693	•	•	•															•	•			e
STEP-BAT/LIPO/18,5DC/1.4AH	2320364	•			•														•	•			e
UNO-UPS/ 24DC/24DC/60W	2905907	•	•	•															•	•			
TRIO-UPS/1AC/24DC/5	2866611	•	•	•						•											•		d
MINI-DC-UPS/24DC/2	2866640	•	•	•	•	•															•		c
MINI-BAT/24DC/0.8AH	2866666	•			•																•		d
MINI-BAT/24DC/1.3AH	2866417	•			•																•		d
MINI-DC-UPS/12DC/4	2866598	•	•	•	•	•															•		d
MINI-BAT/12DC/1.6AH	2866572	•			•																•		d
MINI-BAT/12DC/2.6AH	2866569	•			•																•		d

- a) Max. 3000 m
- b) Max. 4000 m
- c) Max. 5000 m
- d) Max. 6000 m
- e) Max. 2000 m

All products receive further approvals on a continual basis.
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- Industrial Ethernet
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- Marking and labeling
- Measurement and control technology
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- Relay modules
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- Surge protection and interference filters
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- Terminal blocks
- Tools
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INSPIRING INNOVATIONS